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# CALENDAR

OF

## Queen's College and University

KINGSTON, CANADA.

FOR THE YEAR 1908-1909.

**PART 1.**



INCORPORATED BY ROYAL CHARTER A.D. 1841.

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KINGSTON :

PRINTED FOR THE UNIVERSITY BY THE BRITISH WHIG.

1908.



This Calendar is for the use of persons intending to take a University course in *Arts* or *Theology*.

For *Medical* Calendar write Dr. A. R. B. Williamson, Kingston, Ontario.

For *Science* Calendar (School of Mining), including all courses in Engineering, write George Y. Chown, B.A., Kingston, Ontario.

The *Educational Courses*, under agreement with the Ontario Education Department, are accepted as the professional courses for (a) First Class Public School Certificate; (b) High School Assistant's Interim Certificate, and (c) Specialists' Interim Certificate. For Calendar write George Y. Chown, B.A., Kingston, Ontario.

For lists of graduates, students, Scholarships and Prizes and pass lists, all Faculties, see complete Arts Calendar.

The complete Arts Calendar and the Examination Papers, all Faculties, will be issued early in June. Thereafter copies (twenty-five cents for Calendar and fifty cents for Examination Papers) may be had on application to the Registrar, George Y. Chown, B.A., Kingston, Ontario., to whom all enquiries for information and letters regarding Arts, Science, Education and Theology courses should be addressed.

**Queen's University  
Library**

**KINGSTON, ONTARIO**

# CALENDAR

OF

## Queen's College and University

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1908/9



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## ACADEMIC YEAR.

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### 1908.

- May 23.—Notice of intention to compete for Matriculation Scholarships to be given in writing to the Registrar.
- July 2.—Matriculation examinations begin at the University and every Collegiate Institute and High School in Ontario.
- Sept. 1—Applications accompanied by fee for Supplemental Pass or Matriculation examinations to be made to the Registrar.
- “ 15—Arts and Science Supplemental Pass examinations begin.
- “ 17—Supplemental Matriculation examinations begin.
- “ 17—Medical Supplemental examinations begin.
- “ 30—Classes in Medicine open.
- “ 30—Classes in Arts, Applied Science and Mining open.
- “ 5—Candidates for B.D., Supplemental and Matriculation examinations in Theology must give notice of their intention to appear.
- Oct. 16—University Day. Fall Convocation.
- “ 26—B.D. Supplemental and Matriculation examinations in Theology begin.
- Nov. 2—Classes in Theology open.
- Dec. 24—Christmas Holidays begin.

### 1909.

- Jan. 5—Classes re-open.
- Feb. 24—Holiday.
- March 1—Time expires for receiving Theses for Ph.D., D.Sc. and Essays for University Prizes.
- “ 31—Class work in Arts and Mining closes.
- April 1—Class work in Medicine closes.
- April 5—Examinations in Arts, Medicine and Mining begin.
- “ 9—Class work in Theology closes.
- “ 13—Examinations in Theology begin.
- “ 26—Statutory Meeting of Senate for conferring Degrees, &c.
- “ 28—Convocation for distributing Prizes, announcing Honours and laureating graduates in Arts, Medicine, Science and Theology.



## UNIVERSITY OFFICERS.

### BOARD OF TRUSTEES.

Retire April, 1912.

**Hon. WM. HARTY.....	Kingston.
*P. C. MCGREGOR, B.A., LL.D.....	Almonte.

Retire April, 1911.

*JAMES DOUGLAS, B.A., LL.D.....	New York.
Rev. W. T. HERRIDGE, D.D.....	Ottawa.
Rev. D. R. DRUMMOND, M.A.....	Hamilton.
Rev. W. J. CLARK.....	Westmount.
SHERIFF MACLENNAN, B.A.....	Lindsay.
Sir SANDFORD FLEMING, K.C.M.G., LL.D.....	Ottawa.
D. B. MACLENNAN, M.A., K.C.....	Cornwall.

Retire April, 1910.

Rev. THOMAS WARDROBE, D.D.....	58 Redpath St., Montreal.
Rev. ROBERT CAMPBELL, M.A., D.D.....	Montreal.
Rev. E. D. McLAREN, M.A., D.D.....	Toronto.
ANDREW T. DRUMMOND, B.A., LL.D.....	Toronto.
J. K. MACDONALD.....	Toronto.
A. E. MALLOCH, M.D.....	Hamilton.
GEORGE GILLIES, B.A.....	Toronto.
*H. A. CALVIN.....	Kingston.
**J. S. WILLISON, LL.D.....	Toronto.

Retire April, 1909.

Rev. G. M. MILLIGAN, B.A., D.D., LL.D.....	Toronto.
Hon. Mr. JUSTICE MACLENNAN, LL.D.....	Ottawa.
FRANCIS H. CHRYSLER, B.A., K.C.....	Ottawa.
J. ROBERTS ALLAN.....	Ottawa.
JOHN CHARLTON.....	Lynedoch.
*R. VASHON ROGERS, B.A., LL.D., K.C.....	Kingston.
**J. McD. MOWAT, M.A.....	Kingston.

Those marked \* are elected by University Council.

Those marked \*\* are elected by graduates.

Retire April, 1908.

Rev. M. MACGILLIVRAY, M.A., D.D.....	Kingston.
Rev. JOHN MACKIE, M.A., D.D.....	Kingston.
G. M. MACDONNELL, B.A., K.C...*	Kingston.
HUGH WADDELL.....	Peterborough.
Sir ROBERT G. REID, K.C.M.G.....	Montreal.
JOHN MCINTYRE, M.A. K.C.....	Kingston.
*DONALD M. MCINTYRE, B.A.....	Kingston.
**Rev. EBER CRUMMY, B.Sc., D.D.....	Toronto.
HON. MR. JUSTICE MACLENNAN, LL.D.....	Chairman.
GEO. Y. CHOWN, B.A.....	Secretary-Treasurer.

The Annual Meeting of the Board will be held in the Senate Chamber on the evening of Wednesday, April 28th.

---

Those marked \* are elected by University Council.

Those marked \*\* are elected by graduates.

## UNIVERSITY COUNCIL.

The Council consists of the Chancellor, the Trustees, the members of the Senate, and an equal number of elective members.

The Chancellor is elected by the Council, except when two or more candidates are nominated, in which case the election is by registered graduates and alumni. He holds office for three years, and, as highest officer of the University, presides at meetings of the Council and Convocation, and at statutory meetings of Senate. In his absence he is represented by the Vice-Chancellor.

Of the elective members eight retire annually, except in every sixth year when ten retire. Successors are elected by registered graduates and alumni. Retiring members may be re-elected.

The Council has power to elect five trustees (one trustee retiring annually); to discuss all questions relating to the College and its welfare; to make representations of its views to the Senate or Board of Trustees; to decide on proposals for affiliation and to arrange all matters pertaining to the installation of the Chancellor, to its own meetings and business, the meetings and proceedings of Convocation, and the fees for membership, registration and voting.

Convocation for the conferring of degrees, etc., will be held upon Wednesday, April 28th, 1909.

### ELECTIVE MEMBERS IN THE ORDER OF THEIR RETIRING.

Retire 1912	P. C. MCGREGOR, B.A., LL.D.....	Almonte
	REV. EBER CRUMMY, D.D.....	Toronto
	R. S. MINNES, M.A., M.D.....	Ottawa
	J. McD. MOWAT, B.A.....	Kingston
	REV. J. HAY, M.A., B.D.....	Renfrew
	JAMES A. MINNES, B.A.....	Kingston
	REV. T. C. BROWN, M.A.....	Toronto
Retire 1911	MISS A. E. MARTY, M.A.....	Ottawa
	D. M. MCINTYRE, B.A. ....	Kingston
	REV. J. D. BOYD, B.A.....	Kingston
	REV. JAMES H. TURNBULL, M.A.....	Ottawa
	G. F. HENDERSON, B.A.....	Ottawa
	REV. J. CUMBERLAND, M.A.....	Stella
	A. H. BEATON, B.A.....	Toronto
	REV. JAMES ANTHONY, M.A.....	Waterdown
	MISS E. FITZGERALD, M.A.....	Niagara Falls, Ont.



	JOHN MARSHALL, M.A.....	Kingston
	J. R. LAVELL, B.A.....	Strathcona, Alta.
	REV. JAMES CARMICHAEL, D.D.....	King
Retire	W. A. LOGIE, M.A., LL.B.....	Hamilton
1910	JUDGE FRALECK, B.A.....	Belleville
	R. H. COWLEY, M.A.....	Ottawa
	R. S. O'LOUGHLIN, M.A.....	New York
	REV. W. W. PECK, M.A., LL.B.....	Arnprior
	FRANCIS KING, M.A.....	Kingston
	W. F. NICKLE, B.A.....	Kingston
	REV. R. LAIRD, M.A.....	Kingston
	REV. N. MACPHERSON, M.A., B.D.....	Indianapolis, Ind.
Retire	REV. D. STRACHAN, B.A.....	Brockville
1909	ANDREW HAYDON, M.A.....	Ottawa
	REV. JAMES BINNIE, M.A., B.D.....	Tweed
	D. D. CALVIN, B.A.....	Kingston
	J. H. MILLS, M.A.....	Waterford
	T. H. FARRELL, M.D.....	Utica, N.Y.
	R. V. ROGERS, K.C., B.A., LL.D.....	Kingston
	H. A. CALVIN .....	Kingston
	J. M. FARRELL, B.A. ....	Kingston
Retire	JAMES DOUGLAS, LL.D.....	New York
1908.	R. M. DENNISTOUN, B.A.....	Peterboro
	E. R. PEACOCK, M.A.....	Toronto
	REV. J. K. MACMORINE, M.A., D.D.....	Kingston
	GEO. W. MITCHELL, M.A.....	Kingston

**CHANCELLOR:**

SIR SANDFORD FLEMING, C.E., K.C.M.G., LL.D.

**PRINCIPAL AND VICE-CHANCELLOR:**

VERY REV. DANIEL MINER GORDON, M.A., D.D.

**VICE-PRINCIPAL:**

JOHN WATSON, M.A., LL.D.

**REGISTRAR:**

GEORGE Y. CHOWN, B.A.

---

**OFFICERS OF INSTRUCTION.**

*I.—In Theology.*

- Very Rev. D. M. Gordon, M.A., D.D.... Primarius Professor of Divinity.  
Rev. D. Ross, D.D..... Professor of Apologetics and New  
Testament Criticism and Dean of  
Theological Faculty.  
Rev. W. G. Jordan, B.A., D.D..... Professor of Hebrew and Old Testa-  
ment Criticism.  
Rev. John Macnaughton, M.A..... Professor of Church History and  
History of Dogma.  
Rev. G. M. Milligan, D.D., LL.D..... Lecturer on Pastoral Theology.  
Rev. J. S. Carruthers..... "Watkins" Lecturer on Elocution.

*II.—In Arts.*

- Nathan F Dupuis, M.A., F.B.S., Edin.... Professor of Mathematics.  
Rev. George D. Ferguson, B.A..... Emeritus Professor of History.  
John Watson, M.A., LL.D..... Professor of Moral Philosophy.  
D. H. Marshall, M.A., F.R.S.E..... Emeritus Professor of Physics.  
James Cappon, M.A..... Professor of English Language and  
Literature, and Dean of Arts Fac-  
ulty.  
J. Macgillivray, Ph.D. (Leipsic)..... Professor of German.  
S. W. Dyde, M.A., D.Sc., LL.D..... Professor of Mental Philosophy.  
Rev. Jas. Fowler, M.A., F.R.C.S..... Emeritus Professor of Botany.  
Adam Shortt, M.A..... "The Sir John A. Macdonald" Pro-  
fessor of Political and Economic  
Science.  
A. P. Knight, M.A., M.D..... "The John Roberts" Professor of  
Animal Biology and Physiology.

W. G. Jordan, B.A., D.D.....	Professor of Hebrew.
P. G. C. Campbell, M.A. (Oxon).....	Professor of Romance Languages.
T. Callander, M.A. (Abdn.) B.A. (Oxon)	Professor of Greek.
W. B. Anderson, B.A.....	Professor of Latin.
J. L. Morison, M.A.....	Professor of History.
W. T. McClement, M.A.....	"The John Roberts Allan" Professor of Botany.
John Marshall, M.A.....	Assistant Professor of English Lan- guage and Literature.
John Matheson, M.A.....	"The William Nickle" Assistant Pro- fessor of Mathematics.
E. W. Patchett, B.A.....	"The Wm. McKenzie" Assistant Pro- fessor of Modern Languages.
G. W. Mitchell, M.A.....	Assistant Professor of Classics.
Oscar Skelton, M.A.....	Lecturer in Political Science.
H. T. Wallace, B.A., B.D.....	"The Robert Waddell" Fellow in Hebrew.
J. C. McConachie, B.A.....	Fellow in Mental Philosophy.
L. M. MacDougall, M.A.....	Fellow in Moral Philosophy.
H. A. Connolly, M.A.....	'01 Fellow in English.

### *III.—In Practical Science.*

Nathan F. Dupuis, M.A., F.B.S., F.R.C.S.	Professor of Mathematics and Mechanism and Dean of Faculty.
Wm. L. Goodwin, B.Sc. (Lond.) D.Sc. (Edin.), F.R.S.C.....	Professor of Chemistry, Director of School of Mining.
D. H. Marshall, M.A., F.R.S.E.....	Emeritus Professor of Physics.
William Nicol, M.A.....	Professor of Mineralogy and Assay- ing.
Rev. Jas. Fowler, M.A., F.R.S.C.....	Emeritus Professor of Botany.
A. P. Knight, M.A., M.D.....	Professor of Animal Biology and Physiology.
L. W. Gill, B.Sc.....	Professor of Electrical Engineering.
Stafford Kirkpatrick, M.Sc.....	Professor of Metallurgy.
.....	Professor of Geology and Petrography.
J. C. Gwillim, B.Sc.....	Professor of Mining Engineering.
N. R. Carmichael, M.A.....	Associate Professor of Physics.
A. K. Kirkpatrick.....	Professor of Civil Engineering.
A. Macphail, B.Sc.....	Professor of General Engineering.

A. L. Clark, M.A., Ph.D.....	Professor of Physics.
F. O. Willhofft, M.A.....	Professor in Mechanical Engineering.
John Waddell, B.A., D.Sc., Ph.D.....	Assistant Professor in Chemistry.
W. C. Baker, M.A.....	Lecturer in Experimental Physics on "The Robert Waddell" Foundation.
M. B. Baker, B.Sc.....	Lecturer on Mineralogy and Geology.
L. A. H. Warren, M.A.....	Lecturer on Applied Mathematics.
C. W. Dickson, M.A., Ph.D.....	Lecturer on Chemistry.
W. O. Walker, M.A.....	Lecturer in Organic Chemistry.
E. W. Henderson, B.Sc.....	Lecturer in Electrical Engineering.
Lindsay Malcolm, M.A., B.Sc.....	Lecturer in Civil Engineering.
G. J. McKay, B.Sc.....	Assistant in Mining and Metallurgy.

#### *IV.—In Medicine.*

D. M. Gordon, M.A., D.D.....	Principal.
J. C. Connell, M.A., M.D.....	Dean.
A. R. B. Williamson, M.A., M.D., M.R.C.S. (Eng.), L.R.C.P. (Lon.).....	Secretary.

#### *Surgery.*

Hon. Michael Sullivan, M.D.....	Emeritus Professor.
D. E. Mundell, B.A., M.D.....	Professor of the Principles and Prac- tice of Surgery.
W. G. Anglin, M.D., M.R.C.S. (Eng.)...	Professor of Clinical Surgery.
Edward Ryan, B.A., M.D.....	Associate Professor of Clinical Sur- gery.
G. W. Mylks, M.D.....	Clinical Assistant.
C. A. Morrison, M.D.....	Clinical Assistant.

#### *Medicine.*

James Third, M.D. (Toronto), M.D., C.M. (Trinity).....	Professor of Medicine and Clinical Medicine.
J. W. Campbell, B.A., M.D., C.M.....	Associate Professor of Medicine and Clinical Medicine
Edward Ryan, B.A., M.D.....	Associate Professor of Clinical Medi- cine.
A. E. Ross, B.A., M.D.....	Professor of Materia Medica, Phar- macology and Pharmacy.
W. C. Barber, M.D. (Tor.), M.D., C.M., (Vic.).....	Clinical Assistant.



W. C. Herriman, M.D. (Tor.).....Clinical Assistant.

*Obstetrics and Gynaecology.*

R. W. Garrett, M.A., M.D.....Professor.

Isaac Wood, M.A., M.D., M.R.C.S.

(Eng.), F.O.S. (Edin.).....Associate Professor.

*Pediatrics.*

Isaac Wood, M.A., M.D., M.R.C.S.

(Eng.), F.O.S. (Edin.).....Professor.

*Ophthalmology, Otology, Laryngology, Rhinology.*

J. C. Connell, M.A., M.D.....Professor.

*Medical Jurisprudence and Toxicology.*

A. R. B. Williamson, M.A., M.D., M.R.C.S.

(Eng.), L.R.C.P. (Lond.).....Professor.

John McIntyre, M.A., K.C.....Lecturer.

*Sanitary Science.*

W. T. Connell, M.D., M.R.C.S. (Eng.),

L.R.C.P. (Lond.).....Professor.

*Pathology and Bacteriology.*

W. T. Connell, M.D., M.R.C.S. (Eng.),

L.R.C.P. (Lond.).....Professor.

A. R. B. Williamson, M.A., M.D., M.R.C.S.

(Eng.), L.R.C.P. (Lond.).....Demonstrator.

William Gibson, M.D.....Demonstrator.

*Mental Diseases.*

W. C. Barber, M.D. (Tor.), M.D., C.M.

(Viv.).....Asst. Supt. Rockwood Hospital for  
Insane, Professor.

*Anatomy.*

Edward Ryan, B.A., M.D.....Professor of Applied Anatomy.

G. W. Mylks, M.D.....Associate Professor of Applied Ana-  
tomy.

F. Etherington, M.D., L.R.C.P. and S.

(Edin.).....Professor of Anatomy.

A. W. Richardson.....

C. A. Morrison, M.D.....

W. Gibson, M.D., C.M.....

J. F. Sparks, B.A., M.D.....

} Demonstrators.

*Biology, Physiology and Histology.*

- A. P. Knight, M.A., M.D. .... Professor.  
F. Etherington, M.D., L.R.C.P. and S.  
(Edin.) ..... Lecturer in Animal Morphology.  
I. G. Bogart, M.D. .... Demonstrator.

*Chemistry and Applied Chemistry.*

- W. L. Goodwin, D.Sc. (Edin.) ..... Professor.  
Isaac Wood, M.A., M.D., M.R.C.S.  
(Eng.), F.O.S. (Edin.) ..... Lecturer.  
A. R. B. Williamson, M.A. .... Lecturer.

*Physics.*

- G. L. Clark, M.A., Ph.D. .... Professor.  
N. R. Carmichael, M.A. .... Associate Professor.  
W. C. Baker, M.A. .... Lecturer.

*Librarian.*

Professor Williamson.

*Secretary of the Faculty.*

Professor Williamson.

*V.—Faculty of Education.*

- Cecil F. Lavell, M.A. .... Professor of the History of Education and Dean of the Faculty.  
O. J. Stevenson, M.A., D. Paed. .... Associate Professor of Education.

*VI.—Examiners in Law.*

- J. L. Whiting, M.A., K.C. .... Criminal Law.  
R. Vashon Rogers, B.A., K.C., LL.D. .... Common Law.  
G. M. Macdonnell, B.A., K.C. .... The Law of Real Property.  
John McIntyre, M.A., K.C. .... Medical Jurisprudence.

## OTHER OFFICERS.

---

*Registrar of University Council.*

FRANCIS KING, M.A.

*Observatory Board.*

THE PRINCIPAL.

*Curators of Library.*

PROFESSORS ROSS, KNIGHT, SHORTT AND MACGILLIVRAY.

*Librarian.*

MISS LOIS SAUNDERS.

*Curators of Museum.*

PROFESSORS OF BIOLOGY AND GEOLOGY.

*Examiner in Medical Matriculation.*

ARTHUR E. ROSS, F.A., M.D.

*Examiners in Gaelic.*

REV. M. MACGILLIVRAY, M.A., AND JOHN MATHESON, M.A.

*Janitor.*

JOHN V. BURTON.

# TIME TABLE—ARTS.

HOOR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8	Jr. English, A.B. *German. Junior Hebrew. *Mineralogy.	Jr. English, B. *German. Junior Hebrew. *Mineralogy.	Jr. English, A. *German. Senior Hebrew. *Mineralogy.	Jr. English, B. *German. Junior Hebrew. *Mineralogy.	*Chemistry. Jr. English, A. *German. Junior Hebrew. *Mineralogy.	*Assaying.
9	Junior Greek. Eng. History. Mental Philosophy. Animal Biology. El. Mineralogy. *Philosophy. *Pol. Science.	Junior Greek. Mod. History. Mental Philosophy. Animal Biology. *Philosophy. *Pol. Science. *Chemistry.	Junior Greek. Eng. History. Mental Philosophy. Animal Biology. *Philosophy. *Pol. Science. *Mineralogy.	Junior Greek. Mod. History. Mental Philosophy. Senior Physics. *Philosophy. *Pol. Science.	Junior Greek. Mod. History. Mental Philosophy. Animal Biology. *Philosophy. *Pol. Science. *Mathematics. *Chemistry.	*Assaying.
10	Junior Latin. Senior French. Economics. Junior Physics. *Latin. *History. *Physics. *Philosophy. *Botany. *Geology.	Junior Latin. Senior French. Sr. English A. Senior Politics. Sr. Mathematics. Botany. *Latin. *German. *History.	Junior Latin. Sr. English B. Economics. Botany. *Latin. *History. *Philosophy. *Mathematics. *Botany. *Geology.	Junior Latin. Senior French. Senior Politics. Sr. Mathematics. Botany. *Latin. *German. *History. Biol. Laboratory.	Junior Latin. Senior French. Economics. Italian. *Latin. *French. *History. Biol. Laboratory. *Mathematics.	*Assaying.
11	Senior Latin. Junior German. Junior Chemistry. *English. *Greek. *Mathematics. *Botany. *Geology.	Senior Latin. Junior German. Junior Chemistry. (Practical). *English. *Greek. *Mathematics. *Botany. *Geology.	Senior Latin. Junior German. Junior Chemistry. (Practical). *English. *Greek. *Mineralogy. *Botany. *Geology.	Senior Latin. Junior German. Sr. Chemistry I. *French. *Greek. *Mathematics. *Botany. *Geology.	Senior Latin. Junior German. Sr. Chemistry, II. *English. *Greek. *Botany. *Geology.	*Assaying.



12	<p>Sr. Greek. Sr. German. *French. *Philosophy. *An. Biology.</p>	<p>Sr. Greek. Sr. German. Sr. English, A. *French. *Sanskrit. *Philosophy. *An. Biology.</p>	<p>Sr. Greek. Sr. German. *French. *Sanskrit. *Philosophy. *An. Biology.</p>	<p>Sr. Greek. Sr. German. Sr. English, B. *French. *Philosophy. *An. Biology.</p>	<p>Sr. Greek. Sr. German. *Latin. *French. *Philosophy. *Philology. *An. Biology. Astronomy.</p>	*‡Assaying.
2	<p>Jr. French. Sr. English A. *Mineralogy.</p>	<p>Jr. French. Sr. English, B. Geology. *Physics. *Chemistry.</p>	<p>Jr. French. Sr. French. Sr. English A. *Physics.</p>	<p>Jr. French. Sr. English, A. &amp; B. Geology. *Physics.</p>	<p>Jr. French. Sr. English, B. *English. Blowpipe Analysis.</p>	*‡Assaying.
3	<p>Jr. Mathematics Jr. Chemistry, A. (Practical). *Chemistry.</p>	<p>Jr. Physics. *Physics. *Chemistry.</p>	<p>Jr. Mathematics *Mathematics. *Chemistry.</p>	<p>Jr. Physics. *Mathematics. *Physics. *Chemistry.</p>	<p>Sr. Hebrew. Jr. Mathematics *Chemistry.</p>	*‡Assaying.
4	<p>*Mathematics.</p>	<p>*Mathematics.</p>	<p>*Mathematics.</p>			*‡Assaying.

\*Denotes Honours.

‡Second term only.

TIME TABLE—THEOLOGY.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.
8	Sr. Hebrew.	Jr. Hebrew.	Sr. Hebrew.	Jr. Hebrew.	Jr. Hebrew.
9		*O.T.Criticism	*Ch. History.	*O.T.Criticism	*N.T.Criticism
10	N. T. Criticism	History of Dogma.	O.T.Criticism.	N. T. Criticism	O.T.Criticism.
11	Ch. History.	Divinity.	Divinity.	Ch. History.	Ch. History.
12	Homiletics.	Apologetics.	Apologetics.	Apologetics.	Homiletics.
3		Eng. Bible.	N.T.Language.	Eng. Bible.	Sr. Hebrew.

\*Denotes Honours Classes for post graduate work will be arranged at the beginning of the session.

## JUNIOR AND SENIOR MATRICULATION EXAMINATIONS.

SEPTEMBER, 1908.

9 A.M.

2 P.M.

Thursday,	17th	Sept.—English Composition.	Eng. Literature.
Friday,	18th	“ —History.	Geometry.
Saturday,	19th	“ —Latin Authors.	Latin Grammar & Com- position.
Monday,	21st	“ —Physics.	
Tuesday,	22nd	“ —Arithmetic.	Algebra.
Wednesday,	23rd	“ —French Authors.	French Grammar & Com- position.
Thursday,	24th	“ —Greek Authors.	Greek Grammar & Com- position.
		—German Authors.	German Grammar & Composition.
Friday,	25th	“ —Botany.	Animal Biology.
Saturday,	26th	“ —Chemistry.	English Grammar.

## PASS SUPPLEMENTAL EXAMINATIONS.

SEPTEMBER, 1908.

9 A.M.

2 P.M.

Tuesday,	15th	Sept.—Jr. Latin.	Sr. Latin.
Wednesday,	16th	“ —Economics.	Politics.
Thursday,	17th	“ —Jr. English.	Sr. English.
Friday,	18th	“ —English History.	Modern History.
			History.
Saturday,	19th	“ —Mental Philosophy.	Moral Philosophy.
Monday,	21st	“ —Jr. Physics.	Sr. Physics.
Tuesday,	22nd	“ —Jr. Mathematics.	Sr. Mathematics.
Wednesday,	23rd	“ —Mineralogy.	Geology.
		*Jr. French.	**Sr. French.
Thursday,	24th	“ —Jr. Greek.	Sr. Greek.
		*Jr. German.	**Sr. German.
Friday,	25th	“ —Botany.	Animal Biology.
Saturday,	26th	“ —Jr. Chemistry.	Sr. Chemistry.
Tuesday,	27th	Oct.—Jr. Hebrew.	Sr. Hebrew.

\*8.30 Dictation.

\*\*1.30 Dictation.

## PASS EXAMINATIONS.

APRIL, 1909.

### ARTS.

9 A.M.

2 P.M.

Monday,	5th April—*	Jr. French.	**Sr. French.
Tuesday,	6th	—Jr. Chemistry.	Sr. Chemistry.
Wednesday,	7th	—Jr. English.	Mineralogy.
Thursday,	8th	—Sr. English.	Geology.
Friday,	9th	—Economics.	Politics.
Saturday,	10th	—Jr. Mathematics.	Modern History.
Monday,	12th	—Sr. Mathematics.	English History.
Tuesday,	13th	—Jr. Latin.	Sr. Latin.
Wednesday,	14th	—Mental Philosophy.	Moral Philosophy.
Thursday,	15th	—Jr. Physics.	Sr. Physics.
Friday,	16th	—*Jr. German.	**Sr. German.
Saturday,	17th	—Jr. Greek.	Sr. Greek.
Monday,	19th	—Botany.	Animal Biology.
Tuesday,	20th	—Jr. Hebrew.	Sr. Hebrew.

### THEOLOGY.

9 A.M.

Monday,	12th April—	Church History.
Tuesday,	13th	—O. T. Criticism.
Wednesday,	14th	—Sr. O. T. Criticism.
Thursday,	15th	—New Testament Criticism.
Friday,	16th	—Divinity.
Saturday,	17th	—Apologetics.

Three hours allowed for each paper.

Time Table for Honour Examinations will be issued in March.

\*8.30 Dictation.

\*\*1.30 Dictation.



## GENERAL ANNOUNCEMENT.

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QUEEN'S COLLEGE has, under its Royal Charter, "the style and privileges of a University."

The Sixty-eighth Session will open on Wednesday, the 30th of September, 1908.

**BOARDING.**—Lists of Boarding houses may be obtained from the Registrar. A residence for a limited number of women students has been recently established. Persons desiring information should write to "The Secretary of Woman's Residence, Queen's University, Kingston."

**HOSPITAL PRIVILEGES.**—The Governors of the Kingston General Hospital agree to give to those students who take out Hospital tickets (cost, \$1) all the advantages of a private room, including room, board, attendance of nurses in training, and ordinary medicines, when requiring medical or surgical treatment, from October 1st to May 1st. These benefits are conditional on 250 students taking out tickets by November 1st.

**REGISTRATION.**—All students are required to have their names entered in the University Register. Before registration they must pay the required fees.

**ATTENDANCE AT CHURCH.**—All students are expected to attend the churches to which they profess to belong, and produce certificates of attendance from their clergymen when required.

**THE LIBRARY** contains about 46,000 volumes. Students are entitled to the use of it subject to by-laws.

Intra-mural students wishing to obtain books from the Library are required to make a deposit of \$1.00 for one book, \$2.00 for two books, or \$3.00 for three books. No fee is required, and deposit is refunded when desired.

Cupboards containing small departmental libraries in the various subjects are provided in the Consulting Rooms, for which students may obtain keys from the Librarian on depositing \$1.00. A special section is devoted to Mental and Moral Philosophy, and all students taking these subjects are expected to provide themselves with keys for the cupboards.

Extra-mural students may obtain books from the Library on payment of a deposit of \$2.00 for one book, \$4.00 for two, and \$5.00 for three. Deposit may be withdrawn at any time. There is no fee, but the postage is paid by the borrower, being deducted from deposit before returning. For further particulars and regulations apply to the Librarian. Special arrangements are made for supplying the necessary books to extra-mural students in the Ph.D., B. Paed. and D. Paed. courses.

All communications concerning books, and all deposits must be made directly to the Librarian.

J. McDonald Mowat, Esq., B.A., Kingston, Ont., agreed to give the sum of \$25.00 annually to the Political Science Department to be expended in the purchase of books. For the present this sum will go towards obtaining the

British Blue Books. In this and all donations of a similar nature, the books will be marked with the donor's name, and the department for which they are given.

THE MUSEUM.—The Geological collections, embracing rocks, minerals and fossils, contain the following:

1. The Bell collections, illustrating a north and south stratigraphical section across the Province from Lake Erie, 1,000 specimens. Section across The Ottawa River, 500.

2. Specimens of rocks and minerals from various sources, 3,600.

3. Specimens of fossils, 5,000. The rocks and minerals contributed and collected during late years are deposited in the collections of the School of Mining.

4. The Botanical collection contains 1,200 genera, 3,650 species, and 9,450 sheets of mounted plants. The private herbarium in the museum contains 2,157 genera, 8,654 species, and 14,731 sheets. These include large collections of Tasmanian, Australian, South African, European and Asiatic species. The flora of the British Islands is almost completely represented. A large addition has been recently made to the herbarium.

5. The Zoological collection contains: Mammals, 26; birds, 130; fish, 40; invertebrates, about 200 in alcohol and 150 dry; a small collection of reptiles, and another of insects; the mollusca are represented by about 2,600 shells.

ACADEMIC COSTUME.—All graduates and undergraduates when attending class or any college meeting, shall wear the costume prescribed by the University.

Each degree has its distinctive hood, as follows: B.A., black, bordered with red silk; M.A., scarlet; B.Sc., black silk, bordered with yellow silk; D.Sc., black silk, lined with blue silk, bordered with white; M.D., scarlet, bordered with white; B.D., white, bordered with crimson plush; D.D., black silk, lined with white silk; LL.B., blue, bordered with white fur; LL.D., black silk, lined with blue silk; Ph.D., black silk, lined with purple, bordered with white.

Applications for degrees will be considered only when returns for April and September examinations are submitted and at the meeting of Senate immediately preceding Christmas vacation.

FEES.—Graduation and spring examination fees must be paid before March 23rd, supplemental examination fees before September 1st; all other fees on or before October 10th. Students failing to register within ten days of the opening of the session shall pay an extra registration fee of \$3.00.

#### FEES: (1) FACULTY OF ARTS.

Senior Matriculation Examination .....	\$10 00
Senior Matriculation on <i>pro tanto</i> certificate .....	10 00
Junior Matriculation Examination .....	5 00

Athletics . . . . .	per session	\$3 00
Registration . . . . .	"	10 00
Class Fees . . . . .	"	25 00
†Any class except those mentioned below . . . . .	"	8 00
†Junior Chemistry . . . . .	"	12 00
†Senior Chemistry . . . . .	"	12 00
Pass Examination . . . . .	"	10 00
Honour Examination . . . . .	"	12 00
Special for Intra-mural students who write at outside centres. . . . .		5 00
Change of classes after registration. . . . .		2 00

### SPECIAL FEES.

Laboratory—Honour Qualitative Analysis . . . . .	per session	\$15 00
" Honour Quantitative Analysis . . . . .	"	15 00
" Physics, Pass or Prelim. Honour. . . . .	"	2 00
Laboratory—Physics, Final or Exper. Honour. . . . .	"	10 00
" Botany, Pass Course . . . . .	"	1 00
" †Botany, Honour Course . . . . .	"	3 00
" Animal Biology, Pass Course . . . . .	"	5 00
" Animal Biology, Preliminary Honours . . . . .	"	15 00
" Animal Biology, Final Honours . . . . .	"	10 00
Junior Philosophy (correcting essays) . . . . .		1 00
Matriculation Certificate . . . . .		5 00
Certificate of standing . . . . .		1 00
Graduation—Bachelor of Arts (B.A.) . . . . .		10 00
" Master of Arts (M.A.) . . . . .		20 00
" Bachelor of Pedagogy (B. Pæd.) . . . . .		10 00
" Doctor of Philosophy (Ph. D.) . . . . .		50 00
" Doctor of Science (D.Sc.) . . . . .		50 00
" Doctor of Pedagogy (D. Pæd.) . . . . .		50 00
Admission ad eundem gradum (B.A.) . . . . .		20 00
" " statum . . . . .		10 00

Students taking Physics, Chemistry, Geology or Mineralogy must register in the School of Mining, pay the fee of \$1.00 and make a deposit of \$5.00.

†Students collecting 200 specimens for their own use will be exempt from this fee.

†These fees apply only to unmatriculated students who do not pay full class fees.

### FEES: (2) FACULTY OF PRACTICAL SCIENCE.

Matriculation Examination (September) . . . . .	\$	5 00
Registration . . . . .	per session	10 00
Athletics . . . . .	"	3 00

†Class Fees .....	per session \$60 00
Pass Examination .....	“ 10 00

FOR STUDENTS NOT PAYING CLASS FEES AS ABOVE.

Any Class .....	per session \$12 00
Laboratory—Qualitative Analysis .....	“ 15 00
“ Quantitative Analysis .....	“ 15 00
“ Mechanical and Engineering.....	“ 20 00
“ Honour Practical Physics .....	“ 10 00
“ Pass Practical Physics .....	“ 2 00
“ Petrography .....	“ 5 00
“ Assaying .....	“ 5 00
Certificate of standing .....	1 00
Graduation—B.Sc. . . . .	20 00
“ M.E. . . . .	20 00
Admission ad eundem statum .....	10 00

†Any student registered in 1905 or previously will only require to pay \$50 class fees per session.

FEES: (3) FACULTY OF MEDICINE.

Matriculation Examination .....	\$ 5 00
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The Sessional Fee, including Classes, Registration, Athletics, Library, Examination, Laboratories, and the required amount of dissection material is \$100 per session. If paid before October 6th, \$95. If not paid before January 10th, \$105. Special arrangements will be made with those who do not take the full course of any year.

SPECIAL FEES.

Graduation—M.D., C.M.....	\$ 30 00
Fifth year .....	50 00
Supplemental Examinations .....	10 00
Hospital Ticket—Full Course .....	20 00
Hospital Ticket—Single Session .....	7 00
Ad eundem statum .....	10 00
Exclusive use of Microscope per Session .....	5 00

For further information apply to Secretary, Medical Faculty.

FEES: (4) FACULTY OF THEOLOGY.

Registration .....	per session \$ 5 00
Matriculation .....	“ 2 00
Athletics .....	“ 3 00



Pass Examination .....	per session	\$ 3 00
Supplemental Pass Examination .....	"	3 00
B.D. Examination .....	"	6 00

SPECIAL FEES.

Testamur .....	\$ 2 00
Graduation.—Bachelor of Divinity .....	20 00
Admission ad eundem statum .....	10 00

FEES: (5) FACULTY OF EDUCATION.

Per session .....	\$ 15 00
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FEES: (6) FACULTY OF LAW.

Registration .....	per session	\$10 00
Examination .....	"	10 00

SPECIAL FEES.

Graduation.—Bachelor of Laws (LL.B.).....	\$ 20 00
Admission ad eundem gradum .....	20 00
Admission ad eundem statum .....	10 00

(7) AGRICULTURE.

For information apply to J. W. Mitchell, B.A., Superintendent of Dairy School.

## FACULTY OF ARTS.

### ARTICLE I.—PASS MATRICULATION.

#### GENERAL REGULATIONS.

1. The Classes in the University are open to unmatriculated students but candidates for a degree must pass the matriculation examination or an examination accepted by the Senate as equivalent before being admitted to examination on the University courses.

2. Any person presenting a Departmental certificate of matriculation will be admitted as an undergraduate upon paying the registration fee. Any person will be exempt from any part of the Matriculation Examination already passed.

3. Any person who is permitted to attend on presentation of an Ontario Junior Leaving certificate or equivalent certificate from any of the other Provinces which does not include Latin, must take Latin for one session and matriculate in this subject before entering the Junior class, and if he has not passed the Matriculation examination in Greek, French or German he must in his first or second year come up for examination in either the Matriculation or the Junior class work in one of these three subjects.

4. The examination in July will be that conducted for the Universities by the Education Department, known as the Departmental Junior Matriculation Examination. The examination will be held at Queen's University and at the various Collegiate Institutes and High Schools in Ontario. Candidates for this examination, if they propose to write at a Collegiate Institute or High School, must notify the Public School Inspector of their city or county, and pay him the fee before May 23rd, and at the same time send notice to the University Registrar on a form which will be supplied on application. Candidates proposing to write at Queen's University must send the required notice to the Registrar by May 23rd, accompanied by the fee.

5. A second examination will begin at Queen's University on September 17th, 1908. Notice of intention to appear at this examination, together with the fee, must be sent to the Registrar by September 1st, on a form which will be supplied on application. A

candidate failing partially in July and desiring to complete the examination in September, and who did not write at Queen's University, must send a copy of the marks obtained in the July examination, certified by the headmaster of the school at which he wrote.

6. The fees for Matriculation are:—Junior Matriculation, \$5.00; Supplemental examination, in Junior Matriculation subjects in which the candidate has failed, \$2.00 for each subject; total fee not to exceed \$5.00. Senior Matriculation, \$10.00.

7. All candidates for Junior Matriculation shall take English Composition, English Literature, English Grammar, Algebra, Geometry, Arithmetic, History, (British, Canadian and Ancient), Latin, and any two of Greek, French, German, Experimental Science, (Physics and Chemistry).

8. The recommendations of the Principals of approved schools will be accepted in lieu of formal examinations in English Grammar and Arithmetic.

9. The percentage for Pass is forty on each paper.

10. In determining results the confidential reports of the Principals are hereafter to be considered.

11. Candidates who matriculate in any University in the British Empire will be allowed to enter upon a course without further examination. Matriculation Examination from Universities in other countries will be accepted *pro tanto*.

12. Teachers' examinations are accepted *pro tanto* in lieu of the Matriculation Examination, *i.e.*, in so far as the subjects correspond as follows:—

Ontario.....	Jr. Leaving
Prince Edward Island...	Second Class.
Nova Scotia.....	Grade XI.
New Brunswick.....	Second Class.
Quebec.....	{ Academy Grade III. University School AA
Manitoba.....	
Alberta.....	Second Class.
Saskatchewan.....	Grade VII.
British Columbia.....	Grade VII.
	Intermediate.

13. In the case of students over the age of 21 the Senate may postpone the Matriculation examination.

14. Junior Leaving certificates will be accepted *pro rata* at the Junior Matriculation examination.

15. Matriculation scholarships will be awarded on the results of the July Departmental Matriculation examination. See article on Matriculation Scholarships.

16. Candidates for Scholarships must notify the Registrar not later than May 23rd, stating distinctly where they intend to write, and declaring their intention to enter, if successful, on a course of study in Queen's University.

SPECIAL RATES FOR STUDENTS ATTENDING QUEEN'S UNIVERSITY OR  
THE SCHOOL OF MINING.

*Territory*:—Between any station on the Canadian Pacific Railway, the Grand Trunk Railway and the Intercolonial Railway in Canada and Kingston, either direct or over any one of the other lines, where the one way regular first-class rate is \$20 or more.

*Condition*:—If any student is coming to attend Queen's College or the School of Mining *for the first time*, a certificate to that effect will be accepted from parent, guardian, clergyman or magistrate. Subsequently, going or returning from Kingston, certificates must be signed by the Registrar of the University.

*Rate*:—One way continuous passage tickets will be issued at half the regular, first-class, one way rate, *minimum rate to be charged*, \$20. *For example, if the first-class, one way rate is \$50, \$25 will be charged, but if the one way rate is less than \$40, \$20 will be collected.*



## SUBJECTS OF JUNIOR MATRICULATION.

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### GREEK.

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of simple narrative passages similar to the Xenophon prescribed.

Questions in Greek accidence and on the common rules of Greek syntax, to test the candidate's accuracy and comprehension in such matters as are needful for the intelligent reading of his texts.

The following are the prescribed texts:—

1909-1911: Xenophon, *Philpotts and Jerram*, Easy Selections from Xenophon, chaps. 3, 4, 5; Homer, *Iliad* I, 1-350.

1910: Xenophon, *Philpotts and Jerram*, Easy Selections from Xenophon, chaps. 3, 4, 5; Homer, *Iliad* VI, 66-118 and 237 to the end.

Two papers will be set: (1) Prescribed texts; (2) translation at sight, accidence and syntax.

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### LATIN.

Translation at sight of passages of average difficulty from Cæsar, upon which special stress will be laid.

Translation with questions from a prescribed portion of Virgil's *Aeneid*. Questions on Latin accidence.

Translation into Latin of English sentences, involving a knowledge of the following principles of Latin syntax; the common use of the cases; the accusative with the infinitive; the subjunctive in simple sentences; final and result clauses; the law of sequence of tenses; the indirect question; verbs of fearing, doubting and hindering: the use of the participle, gerund and gerundive, active and passive periphrastic; indirect discourse; and the common forms of the conditional sentence. The vocabulary will be taken from the prescribed portion of Cæsar, and special stress will be laid upon this part of the examination. The marks assigned for the translation from prescribed authors shall not be more than 25 per cent. of the total marks assigned to the Latin papers.

Examination upon a short prescribed portion of Cæsar, to test the candidate's knowledge of Latin syntax and his power of idiomatic translation.

The following are the texts prescribed:—

1909: Cæsar, *Bellum Gallicum*, Book IV, chaps. 20-38, and Book V, chaps. 1-23; Virgil, *Æneid*, Book II, vv. 1-505.

1910-1911: Cæsar, *Bellum Gallicum*, Book IV, chaps. 20-38, and Book V, chaps. 1-23; Virgil, *Æneid*, Book I, vv. 1-510.

Two papers will be set: (1) Translation at sight, Virgil, and accidence. (2) Translation into Latin, syntax and idiomatic translation from prescribed Cæsar, etc.

### ENGLISH.

*Grammar and Rhetoric*: The main facts in the development of the language. Etymology and syntax, including the logical structure of the sentence and the inflection, classification and elementary analysis of words. The rhetorical structure of the sentence and paragraph.

One examination paper.

*Composition*: An essay to which special importance will be attached, on one of several themes set by the examiner.

One examination paper.

*Literature*: The candidate will be expected to have memorized some of the finest passages. Besides questions to test the candidate's familiarity with, and comprehension of, the following selections, questions may also be set to determine within reasonable limits his power of appreciating literary art. The candidate shall produce satisfactory proof by the certificate of the Principal of the school from which he comes, or otherwise, that he has read carefully during the preceding year at least four suitable works in English Literature (both prose and poetry) in addition to those prescribed below for examination.

One examination paper.

1909: Coleridge, *The Ancient Mariner*; Wordsworth, Michael, *Influence of Natural Objects*, Nutting, *Expostulation and Reply*, *The Tables Turned*, *The Solitary Reaper*, *Ode to Duty*, *Elegiac Stanzas*, To the Rev. Dr. Wordsworth, "She was a phantom of delight," To the Cuckoo, *The Green Linnet*, "Bright flower! whose home," To a Skylark ("Ethereal minstrel! pilgrim of the sky!"), *Reverie of Poor Susan*, To my Sister, "Three years she grew," September, 1819, Upon the same Occasion, and the following twelve sonnets: "Two voices are there," "A flock of sheep that leisurely," "Earth hath not anything," "It is not to be thought of," "Fair star of evening," "O friend, I know not," "Milton, thou shouldst," "When I have borne in memory," "Brook! whose society," "Scorn not the sonnet," "Tax not the royal saint," "They dreamt not of a perishable home"; Shakespeare, *Merchant of Venice*.

1910: Tennyson, *Ode to Memory*, *The Dying Swan*, *The Lotus Eaters*, Ulysses, "You ask me, why," "Of old sat Freedom," "Love thou thy land," "Tears, idle tears," and the six interlude songs from the *Princess*, *The Brook*, *Ode on the Duke of Wellington*, *Charge of the Light Brigade*, *Enoch Arden*; Shakespeare, *Julius Cæsar*.

1911: Tennyson, *The Poet*, *The Lady of Shalott*, *Oenone*, *The Epic and Morte d'Arthur*, *St Agnes' Eve*, *The Voyage*, "Break, break, break," In the Valley of the Caunteretz; Browning, *My Last Duchess*, "How they brought the good news from Ghent to Aix," *Love among the Ruins*, *Home Thoughts from Abroad*, Up at a Villa, *Andrea del Sarto*, *The Guardian Angel*, *Prospect*, An Epistle of Karshish, *Cavalier Tunes*; Shakespeare, *Macbeth*.

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### GERMAN.

The candidate's knowledge of German will be tested by: (1) simple questions on grammar; (2) the translation of simple passages from English

into German; (3) Translation at sight of easy passages from modern German, and (4) an examination on the following prescribed texts:—

The texts contained in the High School German Reader.

1909: *Baumbach*, Waldnovellen.

1910: *Hauff*, Das kalte Herz.

1911: *Leander*, Träumereien, pp. 45-90 (selected by Van Daell).

Two papers will be set: (1) Prescribed texts and translation at sight; questions on grammar; (2) the translation of English into German.

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#### FRENCH.

The candidate's knowledge of French will be tested by: (1) simple questions on grammar; (2) the translation of simple passages from English into French; (3) translation at sight of easy passages from modern French, and (4) an examination on the following texts:—

*Lamennais*, Paroles d'un Croyant, Chaps. VII and XVII; *Perrault*, Le Maître Chat ou le Chat Botté; *Dumas*, Un Nez Gelé, and La Pipe de Jean Bart; *Alphonse Daudet*, La Dernière classe, and la Chèvre de M. Seguin; *Legouvé*, La Patte de Dindon; *Pouvillon*, Hortibus; *Loti*, Chagrin d'un Vieux Forçat; *Molière*, L'Avare, Acte III, sc. 5. (Est-ce à votre cocher . . . sous la mienne); *Victor Hugo*, Waterloo, Chap. IX; *Rouget de L'Isle*, La Marseillaise; *Arnault*, le Feuille; *Chateaubriand*, l'Exilé; *Théophile Gautier*, la Chimère; *Victor Hugo*, Extase; *Lamartine*, L'Automne; *De Musset*, Tristesse; *Sully Prudhomme*, Le Vase brisé; *La Fontaine*, Le Chêne et Le Roseau.

1909: *Labiche*, Le Voyage de Monsieur Perrichon.

1910: *Scribe*, Le Verre d'eau.

1911: *Labiche*, La Grammaire.

Two papers will be set: (1) Prescribed texts and translations at sight; questions on grammar; (2) the translation of English into French.

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#### HISTORY.

Great Britain and Canada from 1763 to 1885, with the outlines of the preceding periods of British and Canadian history.

The geography relating to the history prescribed.

One half examination paper.

General outlines of Greek history to the fall of Corinth.

General outlines of Roman history to the death of Augustus.

The geography relating to the history prescribed.

One half examination paper.

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#### MATHEMATICS.

*Arithmetic*.—Elementary rules, fractions (vulgar and decimal), contracted methods of computation, square root, interest, discount, commission, insurance, stocks and exchange.

*Mensuration*.—The rectangle, the parallelogram, the triangle, the circle, the parallelepiped, the prism, and the cylinder.

One examination paper.

NOTE.—The problems proposed at this examination shall be simple and direct, and in their solution neatness and accuracy will be insisted on.

*Algebra.*—Elementary rules; highest common measure; lowest common multiple; fractions; square root; simple equations of one, two and three unknown quantities; indices; surds; quadratics of one and two unknown quantities.

One examination paper.

*Geometry.*—A.—CONSTRUCTIONS.

To construct a triangle with sides of given lengths.

To construct an angle equal to a given rectilineal angle.

To bisect a given angle.

To bisect a given straight line.

To draw a line perpendicular to a given line from a given point in it.

To draw a line perpendicular to a given line from a given point not in the line.

Locus of a point equidistant from two given lines.

Locus of a point equidistant from two given points.

To draw a line parallel to another, through a given point.

To divide a given line into any number of equal parts.

To describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To describe a parallelogram equal to a given rectilineal figure, and having an angle equal to a given angle.

On a given straight line to describe a parallelogram equal to a given triangle, and having an angle equal to a given angle.

To find the centre of a given circle.

From a given point to draw a tangent to a given circle.

On a given straight line to construct a segment of a circle containing an angle equal to a given angle.

From a given circle to cut off a segment containing an angle equal to a given angle.

In a circle to inscribe a triangle equiangular to a given triangle.

To find locus of centres of circles touching two given lines.

To inscribe a circle in a given triangle.

To describe a circle touching three given straight lines.

To describe a circle about a given triangle.

About a given circle to describe a triangle equiangular to a given triangle.

To divide a given line similarly to another given divided line.

To find the fourth proportional to three given lines.

To describe a polygon similar to a given polygon, and with the corresponding sides in a given ratio.

To find the mean proportional between two given straight lines.

To construct a polygon similar to a given polygon, and such that their areas are in a given ratio.

To describe a polygon of a given size and shape.



B.—THEOREMS.

The sum of the angles of any triangle is equal to two right angles.

The angles at the base of an isoscles triangle are equal, with converse.

If the three sides of one triangle be equal, respectively, to the three sides of another, the triangles are equal in all respects.

If two sides and the included angle of one triangle be equal to two sides and the included angle of another triangle, the triangles are equal in all respects.

If two angles and one side of a triangle be equal to two angles and the corresponding side of another, the triangles are equal in all respects.

If two sides and an angle opposite one of these sides be equal, respectively, in two triangles, the angles opposite the other pair of equal sides are either equal or supplemental.

The sum of the exterior angles of a polygon is four right angles.

The greater side of any triangle has the greater angle opposite it.

The greater angle of any triangle has the greater side opposite it.

If two sides of one triangle be equal respectively to two sides of another, that with the greater contained angle has the greater base, with converse.

If a transversal fall on two parallel lines, relations between angles formed, with converse.

Lines which join equal and parallel lines towards the same parts are themselves equal and parallel.

The opposite sides and angles of a parallelogram are equal and the diagonal bisects it.

Parallelograms on the same base, or on equal bases, and between the same parallels are equal.

Triangles on the same base, or on equal bases, and between the same parallels are equal.

Triangles equal in area, and on the same base, are between the same parallels.

If a parallelogram and a triangle be on the same base, and between the same parallels, the parallelogram is double the triangle.

Expressions for area of a parallelogram, and area of a triangle.

The complements of parallelograms about the diagonal of any parallelogram are equal.

The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides.

If a straight line be divided into any two parts, the sum of the squares on the parts, together with twice the rectangle contained by the parts, is equal to the square on the whole line.

The square on a side of any triangle is equal to the sum of the squares on the two other sides + twice the rectangle contained by either of these sides and the projection of the other side on it.

If more than two equal straight lines can be drawn from the circumference of a circle to a point within it, that point is the centre.



The diameter is the greatest chord in a circle, and a chord nearer the centre is greater than one more remote. Also the greater chord is nearer the centre than the less.

The angle at the centre of a circle is double the angle at the circumference on the same arc.

The angles in the same segment of a circle are equal, with converse.

The opposite angles of a quadrilateral inscribed in a circle are together equal to two right angles, with converse.

The angle in a semicircle is a right angle; in a segment greater than a semicircle less than a right angle; in a segment less than a semicircle greater than a right angle.

A tangent is perpendicular to the radius to the point of contact; only one tangent can be drawn at a given point; the perpendicular to the tangent at the point of contact passes through the centre; the perpendicular from centre on tangent passes through the point of contact.

If two circles touch, the line joining the centres passes through the point of contact.

The angles which a chord drawn from the point of contact makes with the tangent, are equal to the angles in the alternate segments.

The rectangles under the segments of intersecting chords are equal.

If  $OA \cdot OB = OC^2$ ,  $OC$  is a tangent to the circle through  $A$ ,  $B$  and  $C$ .

Triangles of the same altitude are as their bases.

A line parallel to the base of a triangle divides the sides proportionately, with converse.

If a vertical angle of a triangle be bisected, the bisector divides the base into segments that are as the sides, with converse.

The analogous proposition when the exterior angle at the vertex is bisected, with converse.

If two triangles are equiangular, the sides are proportional.

If the sides of two triangles are proportional, the triangles are equiangular.

If the sides of two triangles about equal angles are proportional, the triangles are equiangular.

If two triangles have an angle in each equal, and the sides about two other angles proportional, the remaining angles are equal or supplemental.

Similar triangles are as the squares on corresponding sides.

The perpendicular from the right angle of a right-angled triangle on the hypotenuse divides the triangle into two which are similar to the original triangle.

In equal circles angles, whether at the centres of circumferences, are proportional to the arcs on which they stand.

The areas of two similar polygons are as the squares on corresponding sides.

If three lines be proportional, the first is to the third as the figure on the first to a similar figure on the second.

Questions and easy deductions on the preceding constructions and theorems.

It is recommended that the study of formal demonstrative Geometry be preceded by a course in Practical Geometry, extending over not more than a year, and embracing the following:—

Definitions; fundamental geometric conceptions and principles; use of simple instruments, as compasses, protractor, graduated rule, etc.; measurement of lines and angles, and the construction of lines and angles of given numerical magnitude; accurate construction of figures; some leading propositions in plane geometry reached by induction as a result of accurate construction of figures; deduction also employed as principles are reached and assured. At the examination, questions may be given in Practical Geometry, the constructions being such as naturally spring from the prescribed course. Candidates must provide themselves with a graduated ruler, compasses, set-square and protractor.

In the formal deductive Geometry modifications of Euclid's treatment of the subject will be allowed, though not required, as follows:—

The employment of the "hypothetical construction."

The free employment of the method of superposition, including the rotation of figures about an axis, or about a point in a plane.

A modification of Euclid's parallel postulate.

A treatment of ratio and proportion restricted to the case in which the compared magnitudes are commensurable.

One examination paper.

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#### ELEMENTARY EXPERIMENTAL SCIENCE.

*Physics:* Use of meter rule; use of calipers and vernier for more accurate metric measurements (*e.g.*, diameters of wires, thickness of glass, plates, etc.); numerical calculations in the metric system.

Use of balance.

Specific gravity, by special gravity bottle and hydrostatic balance of liquids and of solids.

Boyle's law; barometer; diffusion of gases.

Use of Fahrenheit and centigrade thermometers; determination of zero and boiling point; boiling point dependent on pressure.

Expansion of solids, liquids and gases; examples.

Specific heat, latent heat; easy numerical examples.

Transmutation of matter; indestructibility of matter.

Solution, precipitation, crystallisation and evaporation.

One half examination paper.

*Chemistry:* Properties of hydrogen, chlorine, oxygen, sulphur, nitrogen, carbon, and their different compounds, especially those of economic and industrial importance.

Mixtures, solutions, chemical compounds, elements, nomenclature, laws of chemical combination, reacting weights, chemical formulæ and equations, with easy numerical examples.

One half examination paper.

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## ARTICLE II.—SENIOR MATRICULATION.

1. Candidates who intend to pursue an Honour Course in the University are recommended to take the Senior Matriculation (Form IV) in as many subjects as possible.

2. Candidates for Senior Matriculation shall take English, Latin, History, Mathematics, and any two of Greek, French, German, Experimental Science (Physics and Chemistry).

\*3. Candidates who have taken forty per cent. on the Senior Matriculation or Senior Leaving papers of Ontario, or equivalents in other Provinces, in Latin, Greek, French, German, Mathematics, English, History, Chemistry, Physics, Botany, or Animal Biology, will, on payment of the *pro tanto* fee, not be required to take the University Junior class in the subject. As no student is allowed to pass more than five classes in a session, (see clause 5, article VIII), any one entering under this clause will not be exempt from more than five classes. Students who are allowed four classes may complete their course in three years.

4. Any person presenting a Senior Leaving certificate of Ontario, or equivalent certificate, will be permitted to enter upon a University course. Any person entering with the Science option must, in his first examination, include either Junior Latin, Greek, French or German.

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## SUBJECTS OF SENIOR MATRICULATION.

### GREEK.

Translation into English of passages from the prescribed texts, with questions thereon.

Translation at sight of prose passages of average difficulty from Xenophon's historical works.

Translation into Greek of sentences (based on Xenophon's vocabulary) to test the candidate's scholarship in matters of accidence, syntax and phraseology.

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\*NOTE.—Candidates intending to avail themselves of this clause should write the Deputy Minister of Education, stating where and when they wrote, and have their marks forwarded to the Registrar, who will advise the classes allowed.

The following are the prescribed texts:—

1909-11: Xenophon, *Hellenica*, (Philpott's and Jerram's Selections, Sections I and II); Homer, *Iliad* I, 1-350; III, 121-244; VI, 66-118 and 237 to the end; *Odyssey* VI and IX.

Two papers will be set: (1) prescribed texts; (2) translation at sight and Greek prose composition.

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#### LATIN.

Translation into English of passages from prescribed texts.

Translation at sight of passages of average difficulty from Cæsar.

Grammatical questions on the passages from prescribed texts, and such other questions as arise naturally from the context.

Translation into Latin of English sentences to illustrate Latin syntax and of continuous passages of English, similar in style to the authors read.

The following are the prescribed texts:—

1908: Cæsar, *de Bello Gallico*, Books I and II; Horace, *Odes*, Book I, 1, 2, 5, 6, 10, 14, 22, 24, 31, 34, 35, 38; Book II, 3, 10, 14, 15, 16, 18; Book III, 1, 2, 3, 4, 5, 13, 21, 23, 24, 25, 29, 30; Book IV, 2, 4, 5, 7, 15.

Two examination papers: (1) Latin prose; (2) Authors and sight translation.

1909: Virgil, *Æneid*, Book II, vv. 1-505; Cicero, *Pro Lege Manilia*.

1910, 1911: Virgil, *Æneid*, Book I, vv. 1-510; Cicero, in *Catilinam*, I and II.

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#### ENGLISH.

*Composition*: An essay on one of several themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation, and proper construction of sentences are indispensable. The candidate should also give attention to the structure of the whole essay, the effective ordering of the thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

One examination paper.

*Literature*: Such questions only will be set as may serve to test the candidate's familiarity with, and intelligent and appreciative comprehension of the prescribed texts. The candidate will be expected to have memorised some of the finest passages. In addition to the questions on the prescribed selections others will be set on a "sight passage" to test the candidate's ability to interpret literature for himself.

One examination paper.

1909: Coleridge, *The Ancient Mariner*; Wordsworth, *Michael*, *Influence of Natural Objects*, *Nutting*, *Expostulation and Reply*, *The Tables Turned*, *The Solitary Reaper*, *Ode to Duty*, *Elegiac Stanzas*, to the Rev. Dr. Words-



worth, "She was a phantom of delight," To the Cuckoo, The Green Linnet, "Bright flower! whose home," To a Skylark, ("Ethereal minstrel! pilgrim of the sky!"), Reverie of Poor Susan, To my Sister, "Three years she grew in sun and shade," September 1819, Upon the same Occasion. The following twelve sonnets: "Two voices are there," "Scorn not the sonnet," "A flock of sheep that leisurely," "Earth hath not anything," "It is not to be thought of," "Fair star of evening," "O friend! I know not," "Milton! thou shouldst," "When I have borne in memory," "Brook! whose society," "Tax not the royal saint," "They dreamt not of a perishable home"; Shakespeare, Merchant of Venice, Henry IV, Part I.

1910: Tennyson, Ode to Memory, The Dying Swan, The Lotus Eaters, Ulysses, 'You ask me, why,' "Of old sat Freedom," "Love thou thy land," "Tears, idle tears," and the six interlude songs from the Princess, The Brook, Ode on the Duke of Wellington, Charge of the Light Brigade, Enoch Arden; Shakespeare, Julius Cæsar, Mid-Summer Night's Dream.

1911: Tennyson, The Poet, The Lady of Shalott, Oenone, The Epic and Morte d'Arthur, St. Agnes' Eve, The Voyage, "Break, break, break," In the Valley of the Caunteretz; Browning, My Last Duchess, "How they brought the good news from Ghent to Aix," Love among the Ruins, Home Thoughts from Abroad, Up at a Villa, Andrea del Sarto, The Guardian Angel, Prosopice, An Epistle of Karshish, Cavalier Tunes; Shakespeare, Macbeth, As You Like It.

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#### GERMAN.

The prescription of work in grammar, the translation of English into German and sight translation is the same for honours as for pass, but the examinations will be of a more advanced character.

The following are the prescribed texts:—

The texts contained in the High School German Reader.

1909: *Baumbach*, Waldnovellen; *Zschokke*, Der tote Gast.

1910: *Hauff*, Das kalte Herz; *Baumbach*, Der Schweigersohn; *Elz*, Er ist nicht eifersüchtig; *Wichert*, Post Festum.

1911: *Leander*, Träumereien, pp. 45 o 90 (selected by Van Daell). *Baumbach*, Der Schweigersohn; *Elz*, Er ist nicht eifersüchtig; *Wichert*, Post Festum.

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#### FRENCH.

The prescription of work in grammar, the translation of English into French and sight translation, is the same for honours as for pass, but the examination will be of a more advanced character.

The following are the prescribed texts:—

*Lamennais*, Paroles d'un croyant, Chaps. VII and XVII; *Perrault*, le Maître Chat ou le Chat botté; *Dumas*, Un nez gelé, and la Pipe de Jean Bart; *Alphonse Daudet*, la dernière Classe, and la Chèvre de M. Seguin; *Legouvé*,



La Patte de Dindon; *Pouvillon*, Hortibus; *Loti*, Chagrin d'un Vieux Forçat; *Molière*, L'Avare, Acte III, sc. 5, (Est-ce à votre cocher . . . sous la mienne); *Victor Hugo*, Waterloo, Chap. IX; *Rouget de l'Isle*, La Marseillaise; *Arnault*, La Feuille; *Chateaubriand*, L'Exilé; *Théophile Gautier*, La Chimère; *Victor Hugo*, Extase; *Lamartine*, L'Automme; *De Musset*, Tristesse; *Sully Prudhomme*, Le Vase brisé; *La Fontaine*, Le Chêne et le Roseau.

1909: *Labiche*, Le Voyage de Monsieur Perrichon; *Mérimée*, Quatre Contes, ed. by F. C. L. Steenderen (Holt & Co.).

1910: *Scribe*, Le Verre d'eau; *Malot*, Remi en Angleterre; (ed. Margaret de G. Verral. Pitt. Press).

1911: *Labiche*, La Grammaire; *Chateaubriand*, Memoires d'outre-Tombe (selections published by Clarendon Press).

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#### HISTORY.

General outline of mediæval and modern European history with special reference to British history.

The geography relating to the history prescribed.

One examination paper.

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#### MATHEMATICS.

*Algebra*: Elementary rules; highest common measure; lowest common multiple; fractions; square root; simple equations of one, two and three unknown quantities; indices, surds, quadratics of one and two unknown quantities; theory of divisors; ratio, proportion and variation; progressions; notation; permutations and combinations; binomial theorem; interest forms; annuities.

One examination paper.

*Trigonometry*: Trigonometrical ratios with their relations to each other; sines, etc., of the sum and difference of angles with deduced formulas; use of logarithms; solution of triangles; expressions for the area of triangles; radii of circumscribed, inscribed and escribed circles.

One examination paper.

*Problems*: One paper.

*Geometry*: A.—Exercises on the course prescribed for the pass examination, with special reference to the following topics:—loci, maxima and minima; the system of inscribed, escribed and circumscribed circles of a triangle, with metrical relations; radical axis.

B.—The following additional propositions in Synthetic Geometry, with exercises thereon:—

To divide a given straight line internally and externally in medial section.

To describe a square that shall be equal to a given rectilineal figure.

To describe an isosceles triangle having each of the angles at the base double of the third angle.

To inscribe a regular pentagon in a given circle.

The squares on two sides of a triangle are together equal to twice the square on half the third side and twice the square on the median to that side.

If  $ABC$  be a triangle, and  $A'$  be joined to a point  $P$  of the base such that  $B P : P C = m : n$ , then  $n A B^2 + m A C^2 = (m + n) A P^2 + n B P^2 + m P C^2$ .

In a right-angled triangle the rectilineal figure described on the hypotenuse is equal to the sum of the similar and similarly described figures on the two other sides.

If the vertical angle of a triangle be bisected by a straight line which also cuts the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the segments of the base, together with the square on the straight line which bisects the angle.

If from the vertical angle of a triangle a straight line be drawn perpendicular to the base, the rectangle contained by the sides of the triangle is equal to the rectangle contained by the perpendicular and the diameter of the circle described about the triangle.

The rectangle contained by the diagonals of a quadrilateral inscribed in a circle is equal to the sum of the two rectangles contained by its opposite sides.

Two similar polygons may be so placed that the lines adjoining corresponding points are concurrent.

If a straight line meet the sides  $BC$ ,  $CA$ ,  $AB$ , of a triangle  $ABC$  in  $D$ ,  $E$ ,  $F$ , respectively, then  $BD \cdot CE \cdot AF = DC \cdot EA \cdot FB$ , and conversely. (Menelaus' Theorem.)

If straight lines through the angular points  $A$ ,  $B$ ,  $C$  of a triangle are concurrent, and intersect the opposite sides in  $D$ ,  $E$ ,  $F$ , respectively, then  $BD \cdot CE \cdot AF = DC \cdot EA \cdot FB$  and conversely. (Ceva's Theorem.)

If a point  $A$  lie on the polar of a point  $B$  with respect to a circle, then  $B$  lies on polar of  $A$ .

Any straight line which passes through a fixed point is cut harmonically by the point, any circle, and the polar of the point with respect to the circle.

In a complete quadrilateral each diagonal is divided harmonically by the two other diagonals, and the angular points through which it passes.

*C.—Elementary Analytical Geometry: Axes of co-ordinates. Position of a point in plane of reference.*

Transformation of co-ordinates,—origin changed, or axes (rectangular) turned through a given angle.

$$+2A = x_1(y_2 - y_3) + \dots + \dots$$

Co-ordinates of point dividing line joining  $P_1(x_1, y_1)$  and  $P_2(x_2, y_2)$  in ratio  $m : n$  are

$$x = \frac{m x_2 + n x_1}{m + n}, y = \frac{m y_2 + n y_1}{m + n}.$$

$$(P_1 P_2)^2 = (x_1 - x_2)^2 + (y_1 - y_2)^2$$

Equations of straight lines.

$$\left. \begin{aligned} \frac{x-x_1}{x_1-x_2} &= \frac{y-y_1}{y_1-y_2} \\ \frac{x}{a} + \frac{y}{b} &= 1 \end{aligned} \right\} \begin{array}{l} \text{Line defined by two points} \\ \text{through which it passes} \end{array}$$

$$\left. \begin{aligned} \frac{x-a}{\cos \theta} &= \frac{y-b}{\sin \theta} = r, \\ y &= m x + b, \\ y &= m (x-a), \\ x \cos a + y \sin a &= p. \end{aligned} \right\} \begin{array}{l} \text{Line defined by one point} \\ \text{through which it passes,} \\ \text{and by its direction.} \end{array}$$

General equation of 1st degree,  $A x + B y + C = 0$ , represents a straight line. |

Any line through  $(x_1, y_1)$  is

$$A (x - x_1) + B (y - y_1) = 0.$$

If  $\theta$  be angle between  $A x + B y + C = 0$  and  $A' x + B' y + C' = 0$ , then

$$\tan \theta = \frac{A' B - A B'}{A A' + B B'}$$

Condition of  $\perp$  rity,  $A A' + B B' = 0$ .

Condition of  $\parallel$  ism,  $\frac{A}{A'} = \frac{B}{B'}$ .

Distance from  $(a, b)$  to  $A x + B y + C = 0$ , in direction whose direction cosines are  $(l, m)$  is

$$-\frac{A a + B b + C}{A l + B m}.$$

| distance from  $(a, b)$  on  $A x + B y + C = 0$ .

$$= \pm \frac{A a + B b + C}{\sqrt{A^2 + B^2}}.$$

## THE CIRCLE—

Equations in forms:

$$x^2 + y^2 = r^2.$$

$$(x-a)^2 + (y-b)^2 = r^2.$$

$$x^2 + y^2 - 2 r x = 0.$$

General equation  $x^2 + y^2 + 2 A x + 2 B y + C = 0$ ,

$$\text{or } (x+A)^2 + (y+B)^2 = A^2 + B^2 - C,$$

represents a circle with centre  $(-A, -B)$  and radius

$$\sqrt{A^2 + B^2 - C}.$$

Tangent at  $(x', y')$  to  $x^2 + y^2 = r^2$ , is  $xx' + yy' = r^2$ .

Normal is  $\frac{x}{x'} = \frac{y}{y'}$ .

Tangent in form.

$$y = mx \pm r \sqrt{1 + m^2}.$$

Pole being  $(x', y')$ , polar is  $xx' + yy' = r^2$ .

If pole move along a line, polar turns about pole of that line.

Square of tangent from

$$(x', y') \text{ to } x^2 + y^2 + 2Ax + 2By + C = 0 \\ \text{is } x'^2 + y'^2 + 2Ax' + 2By' + C.$$

Radical axis of

$$x^2 + y^2 + 2Ax + 2By + C = 0, \\ x^2 + y^2 + 2A'x + 2B'y + C' = 0.$$

Easy exercises on the preceding propositions.

One examination paper.

#### PHYSICS.

*Mechanics*: Measurement of velocity; uniformly accelerated rectilinear motion; metre; units of force, work, energy and power; equilibrium of forces acting at a point; triangle, parallelogram, and polygon of forces; parallel forces; principle of moments; centre of gravity; laws of friction; numerical examples.

*Hydrostatics*: Fluid pressure at a point; pressure on a horizontal plane; pressure on an inclined plane; resultant vertical pressure, and resultant horizontal pressure, when fluid is under air pressure and when not; transmission of pressure; Bramah's press; equilibrium of liquids of unequal density in a bent tube; the barometer; air-pump; water-pump, common and force; siphon.

*Electricity*: Voltaic cells, common kinds; chemical action in the cell; magnetic effects of the current; chemical effects of the current; voltmeters; electroplating; astatic and tangent galvanometers; simple notions of potential; Ohm's law; shunts; measurement of resistance; electric light, arc and incandescent; current induction; induction coil; dynamo and motor; the joule and watt; electric bell; telegraph; telephone; elements of terrestrial magnetism.

One examination paper.

#### CHEMISTRY.

Reactions, rates of reactions, reversible reactions, chemical equilibrium. The practical study of the following elements with their most characteristic compounds, having regard to Mendelejeff's classification of the elements, and some of the most important economic and industrial applications: hydrogen,

sodium, potassium, magnesium, zinc, calcium, strontium, barium, boron, aluminium, carbon, silicon, tin, lead, nitrogen, phosphorus, arsenic, antimony, bismuth, oxygen, sulphur, fluorine, chlorine, bromine, iodine, manganese, iron, copper, nickel. A report must be furnished showing the amount and nature of the laboratory work done by each candidate, and the teacher's opinion of his proficiency.

One examination paper.

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## BIOLOGY.

1. **ELEMENTS OF ZOOLOGY:** The candidate will be examined practically on his acquaintance with the structure of the various types prescribed below, and must be prepared to sketch the specimens submitted to him.

*Vertebrate Types:* 1. The fish:—Any one of the common fresh water fishes of Ontario may be employed for the purpose; special attention should be given to the organs of locomotion, circulation, respiration. As several species are easily obtainable this class may be employed for studying the principles of zoological nomenclature.

2. The frog:—Comparison with the fish as to the organs above mentioned—observation of the development of the spawn of one or more Amphibia.

3. The reptile:—A study of the external form of a turtle and a snake, and comparison of both with a lizard.

4. The bird:—Special attention should be given to the plumage, the bill and feet, and to the modifications of the skeletal, muscular and respiratory systems in connection with aerial life.

5. The mammal:—Characters of the chief domesticated and wild mammals of Ontario must be studied, as well as the main facts of internal structure of one of the smaller forms (*e.g.* the rabbit). Comparison of the teeth and feet of the pig, horse, sheep, rabbit, dog, mole, bat.

*Invertebrate Types:* 1. Study of the crayfish as a type of the arthropods. Comparison of the external form of the crayfish with an insect (*e.g.*, grasshopper, cricket, or cockroach) also with a millipede and a spider.

2. Unsegmented and segmented worms. (Planaria or Pistome and Earthworm or Leech.)

3. Fresh water mussel and snail.

4. A fresh water unicellular animal such as an amoeba or paramecium. The natural habits of the various animals studied.

Elements of zoological classification based on forms studied.

2. **ELEMENTS OF BOTANY:** The examination will test whether the candidate has practically studied representatives of the flowering plants of the locality in which the preparatory school is situated.

It will further require an elementary knowledge of the following topics:



Comparison of the various organs of flowering plants:—roots, stems, leaves, hairs and parts of the flower. Reproduction, pollination, fertilization and the nature of fruits and seeds.

Structure of representatives of the chief sub-divisions of cryptogams such as a fern, a lycopod, a horsetail, a liverwort, a lichen, a moss, a mushroom and a chara.

Microscopic structure of plants.

Principles of classification.

Vegetable physiology, especially of nutrition, growth and movement.

Relation to environment.

### ARTICLE III.—ARTS MATRICULATION SCHOLARSHIPS, 1908.

A Scholarship cannot be held without attendance on the University classes. To be eligible for free tuition in the remaining sessions of his course the scholar must pass his annual examination to the satisfaction of the Senate. To hold a Scholarship a candidate must be fully matriculated.\*

I.—The following Scholarships, of the value specified, are awarded on the July Departmental Honour Matriculation examinations.

Candidates for Honour Matriculation Scholarships must take Honour standing in the subjects specified in connection with the Scholarships.

<i>Name and Source of Money.</i>		<i>Free Tuition.</i>	<i>Total Value.</i>	<i>Subjects.</i>
1. PRINCE OF WALES. \$60. Founded by H. M. King Edward VII . . . . .		\$100	\$160	Mathematics, Chemistry, and Physics.
2. GOVERNOR-GENERAL. \$75. Given by His Excellency Earl Grey, LL.D. . . . .		100	175	Classics.
3. CHANCELLOR. \$100. Founded by Sir Sandford Fleming, K.C.M.G., Chancellor . . . . .		100	200	Mathematics.
4. MACKERRAS MEMORIAL. \$70. Founded in memory of the late Prof. Mackerras . . . . .		100	170	Classics.
5. WILLIAMSON No. 1. \$65. Founded in memory of the late Vice-Principal, Rev. Dr. James Williamson. . . . .		100	165	English and History.
6. WILLIAMSON No. 2. \$60. Founded in memory of the late Vice-Principal, Rev. Dr. James Williamson. . . . .		100	160	French and German.

### ARTICLE III.—ARTS MATRICULATION SCHOLARSHIPS, 1908.—(Continued.)

<i>Name and Source of Money.</i>	<i>Free Tuition.</i>	<i>Total Value.</i>	<i>Subjects.</i>
7. LEITCH MEMORIAL No. 1. \$60. Founded in memory of the late Principal Leitch .....	\$100	\$160	English, Chemistry, and Physics or Botany.
8. NICHOLLS FOUNDATION No. 1. \$50. Founded by the late Charlotte Nicholls, of Peterboro' .....	100	150	English, French and German.
9. MAYOR. \$50. Given by the Mayor of Kingston .....	100	150	Latin, French and German.
10. MOWAT. \$50. Founded by the late John Mowat, Esq., of Kingston .....	100	150	Mathematics.
11. FORBES McHARDY. \$25. Founded by the late Forbes McHardy, Esq., Toronto .....	100	125	Mathematics, French and German.
12. McLACHLAN. \$125. Given by R. McLachlan, Esq., Oshawa. . . . .	100	225	English, Latin and French.

II.—The following Scholarships, of the values specified, are awarded on the July Departmental Junior Matriculation examinations.

<i>Name and Source of Money.</i>	<i>Free Tuition.</i>	<i>Total Value.</i>	<i>Subjects.</i>
1. NICHOLLS FOUNDATION No. 2. \$35. Founded by the late Charlotte Nicholls, Peterboro' .....	\$100	\$135	General proficiency.
2. McDOWALL. \$25. Founded in memory of the late Rev. Robert McDowall .....	100	125	Do.
3. NICHOLLS FOUNDATION No. 3. \$20. Founded by the late Charlotte Nicholls, Peterboro' .....	100	120	Do.

ARTICLE III.—ARTS MATRICULATION SCHOLARSHIPS, 1908.—(Continued.)

III.—The following Scholarships have been endowed under special conditions.

Name and Source of Money.	Free Tuition.	Total Value.	Subjects.
1. WATKINS, \$60. Founded by the late John Watkins, Esq., Kingston .....	\$100	\$160	Given to the student of the Kingston Collegiate Institute who stands highest in the Form IV examinations.
2. McLENNAN GLENGARRY FOUNDATION. \$60. a year for four years. Founded by R. R. McLennan, Esq., Alexandria . . . . .	100	340	General proficiency, Jr. Matriculation. Given only to candidates in one of the High Schools of County of Glengarry.
3. MARION STEWART McDONALD. \$75. Founded by John S. McDonald, Esq., Fond du Lac, Wis. ....		75	General proficiency, Junior Matriculation. Given only to candidates from the County of Glengarry.
4. WILSON. \$25. Given by Uriah Wilson, M.P. ....	100	125	General proficiency. Given only to candidates from the Counties of Lennox and Addington.
5. KINGSTON, No. 1, 2, 3, 4. Founded by the City of Kingston . . . . .	100	100	General Proficiency, Junior Matriculation. Given only to candidates from the City of Kingston.

Notice of intention to compete for Scholarships must be sent to the Registrar before May 23rd, 1908, on a form which will be supplied on application.

\*Candidates who wish to present certificates for any part of Matriculation will forward them with the notice. Candidates for Junior Matriculation Scholarships will not be eligible to compete for Senior Matriculation Scholarships in any subsequent year. Junior Matriculation Scholarships will only be available the next ensuing session after they are awarded.

## ART. IV. UNIVERSITY PRIZES, MEDALS AND SCHOLARSHIPS.

### SPECIAL SCHOLARSHIPS.

#### The Rhodes Scholarship in Canada.

Queen's University will, in January, 1912, select a candidate under the Rhodes bequest. The scholar will begin residence at Oxford in October of the year for which he is elected.

The Scholarship is tenable for three years, and is of the value of £300 per annum.

#### ELIGIBILITY OF CANDIDATES.

1. Candidates shall be British subjects and unmarried. They must have passed their nineteenth but not have passed their twenty-fifth birthday, on October 1st of the year for which they are elected.

2. An elected scholar must have reached at least the end of his sophomore or second year's work at some recognized degree-granting University or College of Canada.

3. Candidates may elect whether they will apply for the Scholarship of the Province in which they have acquired any considerable part of their educational qualification, or for that of the Province in which they have their ordinary private domicile, home or residence. They must be prepared to present themselves for examination or election in the Province they select. No candidate may compete in more than one Province, either in the same or in successive years.

4. Only candidates who have passed an equivalent to the Oxford Responsions Examination, or those who are exempted from Responsions by the Colonial Universities' Statute, are eligible for election.

Queen's University having applied for and been admitted to the privileges of the Colonial Universities Statute, candidates coming from Queen's University who have fulfilled the conditions are accepted as candidates for Rhodes' Scholarships without further examination.

#### METHOD OF SELECTION.

In accordance with the wish of Mr. Rhodes, the Trustees desire that "in the election of a student to a Scholarship, regard shall be had to (1) his literary and scholastic attainment, (2) his fondness for and success in manly out-door sports, such as cricket, football and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness and fellowship, and (4) his exhibition during school-days of moral force of character, and of instincts to lead and to take an interest in his schoolmates." Mr. Rhodes suggested that (2) and (3) should be decided in any School or College by the votes of fellow-students, and (4) by the Head of the School or College.

Where circumstances render it impracticable to carry out the letter of these suggestions, the Trustees hope that every effort will be made to give



effect to their spirit, but desire it to be understood that the final decision must rest with the Committee of Selection.

Rhodes Scholars, 1905: J. M. Macdonnell, M.A.; 1907: Norman S. Macdonnell.

### **Exhibition of 1851, Science Research Scholarship.**

This scholarship, of the annual value of £150 stg., is awarded by Her Majesty's Commissioners for the Exhibition of 1851 to students who have given evidence of capacity for original research, and (except in very special circumstances) are under 30 years of age.

The nominee must be a British subject, must have been a *bona fide* student of this University for three years, must have been a student of this University for a full year immediately before his nomination, must be a student of this University at the time of his nomination, (or he must have been a student at this University for a full year ending within twelve months prior to his nomination and since ceasing to be such student must have been engaged solely in scientific study) and must pledge himself not to hold any position of emolument whilst holding the scholarship. He is recommended to the Commissioners by the Senate of the University. The scholarship may be held for a second year, if the report of the first year's work be satisfactory to the Commissioners. The scholar will in the absence of special circumstances, be required to proceed to an institution other than that by which he is nominated, and there pursue some investigation likely to promote technical industries or scientific culture. The particular investigation the student proposes to pursue must be stated before a scholarship can be awarded.

The next recommendation will be made by the Senate in April, 1909.

Science Research Scholars recommended by Queen's University:—

Norman R. Carmichael, M.A., 1894.

Thomas L. Walker, M.A., 1896.

Frederick J. Pope, M.A., 1898.

Wm. C. Baker, M.A., 1900.

C. W. Dickson, M.A., 1901.

C. W. Knight, B.Sc., 1904.

F. H. McDougall, M.A., B.Sc., 1905.

Campbell Laidlaw, B.A., M.D., 1907.

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### **PRIZES.**

These are prizes for literary articles, essays, etc., as specified under each particular prize, and are open to students of the present or preceding session.

CONDITIONS OF COMPETITION.—1. Competitive papers must be given to the Registrar not later than 21st of March.

2. Each paper is to bear a motto, instead of the author's name, and must have attached to it a sealed envelope, bearing the same motto and containing a written declaration over the author's signature, to the effect that it is his unaided composition.

3. The envelope attached to successful papers shall be opened and the writer's name made known at the Convocation at the close of the session.

4. The best productions must be reported by the examiners to be of sufficient merit.

5. All successful productions shall be the property of the University, and be at the disposal of the Senate.

A.—LEWIS.

Value \$25. Given for the best lecture on Matt. V: 3-11.

B.—GOWAN FOUNDATION NO. I.

Value \$25. Given by the Hon. Sir James R. Gowan, K.C.M.G., for the best essay on Immigration.

C.—GOWAN FOUNDATION NO. II.

Value \$25. Given by the Hon. Sir James R. Gowan, K.C.M.G., for "The best Collection of Canadian Plants." The collection must be delivered before the 15th December.

D.—GOWAN FOUNDATION NO. III.

Value \$25 in Books. Given by the Hon. Sir James R. Gowan, K.C.M.G., in Honours in Political Science.

E.—LATIN AND GREEK COMPOSITION.

Two prizes, each of the value of \$10 in books, are offered for competition for the best composition in Latin and Greek prose respectively. Subjects for composition, 1908-9; Latin Prose, Mommsen's History of Rome (Eng. trans., latest edition), Vol. IV, p. 150, "The extensive range" to the end of Chap. X. Greek Prose, *Sargent and Dallin's Materials and Models for Greek Prose Composition* (Longman's), Part VI, Nos. 116, 117, 118, 120.

F.—SPECIAL GERMAN PRIZE.

A prize of the value of \$10 in books is offered for the best examination in April in Senior German.

G.—JAMES C. ROGERS PRIZE IN ENGLISH.

A prize of the value of \$5 in books. Awarded by James C. Rogers, B.A., to the student obtaining the highest standing in Senior English.

H.—MARY FRASER M'LENNAN PRIZE IN HEBREW.

A prize of the value of \$12, founded in memory of Mary Fraser McLennan, of Lancaster, by her sons. Awarded to the student obtaining highest standing in Junior Hebrew.

## SCHOLARSHIPS IN ARTS AND PRACTICAL SCIENCE.

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### 1.—THE CHANCELLOR'S PRACTICAL SCIENCE SCHOLARSHIP.

Value \$70. Given by Sir Sandford Fleming, C.E., K.C.M.G., LL.D., Chancellor of the University. Awarded to the Practical Science student passing the best examination at the end of first year.

### 2.—NEW YORK QUEEN'S ALUMNI SCHOLARSHIP IN BIOLOGY.

Value \$50. Given by the New York Queen's University Society and awarded to the student in Arts or Medicine who obtains the highest number of marks in the honour examinations in physiology and histology.

### 3.—THE ANN ELIZA STAFFORD SCHOLARSHIP IN ANIMAL BIOLOGY.

Value \$40. Founded by T. T. Bower, Esq., Toronto. Awarded to a graduate in first-class honours in Animal Biology who is competent to undertake research work in physiology. The holder must be willing to devote himself exclusively to research and must carry on his investigations in the University laboratories for at least one year from the date of his appointment.

### 4.—THE M. C. CAMERON SCHOLARSHIP IN GAELIC.

Value \$40. Founded by the late M. C. Cameron, M.P., Goderich. Awarded to the best Gaelic scholar, reader and speaker. The examination takes place after the September Matriculation examination. Work prescribed: Ossian's Fingal, Duncan Ban MacIntyre's Poems, Blackie's Language and Literature of the Scottish Highlands. Translation at sight of Gaelic into English and English into Gaelic. This scholarship will not be awarded to any candidate who does not take at least fifty per cent. of the total number of marks in the examination.

### 5.—THE HIRAM CALVIN SCHOLARSHIP IN LATIN.

Value \$25. Given by Hiram Calvin, M.P., Kingston, to encourage the study of Latin in the University. Awarded on the result of the April examinations in Senior Latin, to the best student who is proceeding to the Honour Course in Latin. Not to be held by any student unless in actual attendance. Not necessarily to be awarded, unless a certain degree of merit is shown.

### 6.—THE MACLENNAN SCHOLARSHIP IN GREEK.

Value \$25. Given by Hon. Justice MacleNNan, LL.D., Ottawa, to encourage the study of Greek in the University. Awarded on the results of the April Examinations in Senior Greek to the best student who is proceeding to the Honour Course in Greek. Not to be held by any student unless in actual attendance, and not necessarily to be awarded unless a certain degree of merit is shown.

7.—THE '01 FELLOWSHIP IN ENGLISH.

This Fellowship was established by the Class which graduated in 1901. It is awarded by the Senate to the student who is to act as Assistant Tutor in English during the following session.

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**MEDALS.**

University medals will be awarded to the Candidates who obtain the highest number of marks in the Honour courses leading to the degree of M.A.

Candidates for medals will be required at the final examination to take all the Honour papers in the work of the courses which they select. No medal will be awarded to any candidate who fails to obtain three-fourths of the whole number of marks.

Any tutor engaged in teaching the Honour work of a class on which the medal in that class is awarded shall not compete for the medal.

## SCHOLARSHIPS IN THEOLOGY.

### I.—Matriculation Scholarships.

#### 1.—DAVID STRATHERN DOW.

Founded in 1886 by David Strathern Dow, Esq., Whitby, Ont. Value \$75.

#### 2.—DOMINION.

Founded in 1870 by the late Walter Lawson, Scotland. Value \$70.

#### 3.—BUCHAN NO. 1.

Founded in 1875 by the late Rev. Alexander Buchan, Stirling, Ont. Value \$65.

#### 4.—BUCHAN NO. 2.

Founded by the late Rev. A. Buchan. Value \$55.

#### 5.—BUCHAN NO. 3.

Founded by the late Rev. A. Buchan. Value \$45.

#### 6.—M'INTYRE.

Founded in 1876 by Mrs. Margaret W. McIntyre, Perth, Ont. Value \$20.

### II.—Scholarships Awarded at Close of Session.

#### 1.—SARAH M'CLELLAND WADDELL MEMORIAL.

Founded in 1899, by Hugh Waddell, Esq., South Monaghan, Ont., in memory of his mother, Sarah McClelland. Value \$120. Awarded upon the Sessional Examination at the close of the first year in divinity, Old and New Testament Exegesis, Church History and Elocution.

#### 2.—THE CHANCELLOR'S.

Founded by Sir Sandford Fleming, K.C.M.G. Value \$70. Awarded to the student of the second year who takes the highest standing in the sessional Examinations.

#### 3.—SPENCE.

Founded in 1879, by the late Rev. Alex. Spence, D.D., formerly minister of St. Andrew's Church, Ottawa. Value \$60. Awarded upon the Sessional Examination at the close of the first year in Divinity, Old and New Testament Exegesis, and Apologetics, or Hebrew. Tenable during second and third year in Theology.

#### 4.—LEITCH MEMORIAL NO. 2.

Founded in 1867, in memory of the late Principal Leitch, by subscribers in Scotland and Canada. Value \$80. Awarded upon a Sessional Examination, and tenable during three successive years, should the successful candi-



date, after the completion of his Theological curriculum at this University, continue his studies at this or any European University. Candidates must have the degree of B.A. The next competition will take place in 1911. Subjects of examination: The Epistles to the Romans and Hebrews in Greek, Psalms I-XXV in Hebrew, Butler's Analogy, and the Divinity Lectures of the session.

5.—ANDERSON NO. 1.

Founded by the late Robert Anderson, Esq., Montreal. Value \$40. Awarded in the first year Divinity.

6.—ANDERSON NO. 2.

Founded by the late Robert Anderson, Esq. Value \$35. Awarded in second year Divinity.

7.—THE TAWSE.

Founded by Miss Tawse, King, Ont. Value \$40. Awarded in third year Divinity.

8.—TORONTO.

Founded by the Ladies' Association of St. Andrew's Church, Toronto. Value \$60. Awarded in second year Hebrew.

9.—ST. ANDREW'S CHURCH, TORONTO.

Given by the Session of St. Andrew's Church, Toronto. Value \$45. Awarded in Old Testament Exegesis.

10.—RANKINE NO. 1.

Founded in 1881, by the late Alexander Rankine, Esq., Leamington, England. Value \$45. Awarded in Apologetics.

11.—RANKINE NO. 2.

Founded by the late Alexander Rankine, Esq., Leamington, England. Value \$45. Awarded in New Testament Exegesis.

12.—GLASS MEMORIAL.

Founded in memory of the late Henry Glass, Esq., of Sarnia, by his widow. Value \$30. Awarded in Church History.

13.—MACKIE.

Given by the Rev. John Mackie, M.A., D.D., St. Andrew's Church, Kingston, for the best essay on The Teaching of Paul Regarding Sin. Essays to be handed in not later than Feb. 15th, 1909. For rules of competition see under prizes. Value \$25 in Books. May be taken by a student holding another scholarship.

14.—JAMES ANDERSON BURSARY.

Founded by the late James Anderson, Acton, Ont. Value \$25. Awarded by the Senate to a student who can preach in Gaelic.

15.—WILLIAM MORRIS BURSARY.

Founded by the late Hon. Alexander Morris, in memory of his father. Value \$50. Awarded by the Senate to a Divinity student taking a post-graduate course in the University.

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PRIZES AND SCHOLARSHIPS IN MEDICINE.

Besides University prizes, scholarships and honours open to Medical students, the following are offered, viz.:

1. Two Faculty prizes in Practical Anatomy for the best dissection of any extremity.

2. At the end of the second session:

A prize of \$25.00 to be awarded to the student making the highest number of marks on the year's examinations in Anatomy, Physiology, Histology and Chemistry, Theoretical and Practical.

3. The New York Alumni Association Scholarship of \$50.00. Awarded to the student making the highest number of marks in Honour Physiology and Histology papers of the course. Open also to Arts students in Honour Animal Biology.

4. A standard work on Medicine will be awarded to the student making the highest percentage of marks on the year's examination in Materia Medica, Therapeutics and Pharmacy.

5. At the end of the third session:

The Dean Fowler Scholarship, value \$50.

This scholarship will be awarded to the student making the highest percentage of marks on the examinations of the year and will be enjoyed by the successful candidate during the fourth session.

6. A standard work on Pathology will be awarded for the best written and practical examination on Pathology.

7. At the end of the fourth session:

The Chancellor's Scholarship of \$70.00.

This Scholarship is open to students who take the examinations of the Ontario Medical Council, and is tenable only on condition that during the following year the winner pursues the studies of the fifth session at Queen's as prescribed in the Calendar, or studies in Europe for a like period.

This Scholarship will be awarded to the student who has made the highest number of marks on all examinations for the four years' course.

8. A University Medal to the student making the highest number of marks in the examinations in Practice of Medicine, Clinical Medicine, Pathology, Bacteriology, Sanitary Science and Jurisprudence.

9. A University Medal to the student making the highest number of Marks in Surgery, Clinical Surgery, Obstetrics and Gynecology, Medical and Surgical Anatomy, Eye, Ear, Throat and Nose.

10-12. Three House Surgeoncies at the Kingston General Hospital, of twelve months each, are to be awarded to three students of the fourth year. Candidates for these positions must have passed all previous examinations. These appointments must be approved by the Board of Governors of the Kingston General Hospital.

A House Surgeoncy and the Chancellor's Scholarship cannot be held by the same student, but a student winning both may elect which he will hold.

13. A prize of \$25.00, given by Dr. W. C. Barber, to the fourth year student passing the best examination on the subject of Mental Diseases.

14. Two Clinical Assistants are appointed to the staff of the Rockwood Hospital for the Insane to work during the summer. Applications must be made to Dr. E. Ryan, Supt., by whom the appointments are determined, regard being had to the special qualifications necessary for such work.

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#### ARTICLE V.—TEACHER'S CERTIFICATE.

1. Teachers' Certificates which are of sufficiently recent date will be accepted *pro tanto*.

2. Second Form Primary Public School Leaving, or Part I Junior Leaving certificates will be accepted as the equivalent of Part I Matriculation, and Second Class and Part II Junior Leaving certificates for Part II Junior Matriculation, so far as the subjects correspond.

3. Any person who is permitted to attend on presentation of an Ontario Junior Leaving certificate or equivalent certificate from any of the other Provinces which does not include Latin, must take Latin for one session and matriculate in this subject before entering the Junior class, and if he has not passed the Matriculation examination in Greek, French or German he must in his first or second year come up for examination in either the matriculation or the Junior class work in one of these three subjects.

4. First Class, Senior Leaving, or Form IV certificates of Ontario will be accepted for Senior Matriculation so far as they cover the subjects of matriculation.

5. Any person presenting a Senior Leaving certificate of Ontario, or equivalent certificate, will be permitted to enter upon a University course. Any person entering with the Science option must, with his first examination, include either Junior Latin, Greek, French or German.

\*6. Candidates who have taken forty per cent. on the Senior Matriculation or Senior Leaving papers of Ontario, or equivalents in other Provinces, in Latin, Greek, French, German, Mathematics, English, History, Chemistry, Physics, Botany, or Animal Biology, will, on payment of the *pro tanto* fee, not be required to take the University Junior class in the subject. As no student is allowed to pass more than five classes in a session (see clause 5, article VIII), any one entering under this clause will not be exempt from more than five classes. Students who are allowed four classes may complete their course within three years.

7. Certificates from the different provinces will be accepted for the Junior Leaving and Senior Leaving certificates of Ontario as follows:—

Ontario.....	Jr. Leaving.....	Sr. Leaving.
Prince Edward Island.....	Second Class.....	First Class.
Nova Scotia.....	Grade XI.....	Grade XII.
New Brunswick.....	Second Class.....	First Class.
Quebec.....	{ Academy Grade III. University School AA.	
Manitoba.....	Second Class.....	First Class.
Saskatchewan.....	Grade VII.....	Grade VIII.
Alberta.....	Grade VII.....	Grade VIII.
British Columbia.....	Intermediate.....	Senior Academic.

\*NOTE.—Candidates intending to avail themselves of this clause should write the Deputy Minister of Education, stating where and when they wrote, and have their marks forwarded to the Registrar, who will advise the classes allowed.

## ARTICLE VI.—EXTRA-MURAL STUDENTS.

1. A method of taking the work without attendance has been established with a view to providing for those who wish to continue their studies and yet are for any reason unable to attend the University.

2. The work is as nearly as possible identical with that taken up by intra-mural students and all examinations must be written on in the regular way.

3. All extra-mural students proceeding to a degree, registering after October 21, 1909, are required to attend at least one session.

4. Extra-mural students taking specialist courses for teachers (see page —) are required to attend not less than two full sessions.

5. Students who have completed three years' work, covering three-fourths of the classes required for a degree, are entitled to a University certificate of standing.

6. Candidates for a degree must, before being registered, pass the Matriculation examination or its equivalent.

7. Students are strongly advised to attend for the latter part of the course if possible. If this is not feasible they should not attempt more than a pass course.

8. Extra-mural students should register before October 1st in order that they may receive tutorial assistance for the full session. Students previously registered, wishing to take up work for the winter session, must be registered by October 21st. Students registering for the first time after December 15th will not be allowed to write on the April examinations. Students who wish to write on an examination in September and who have not registered in the preceding October must register by May 21st. They will receive the regular tutorial assistance during the summer.

Students who have registered in October and require further tutorial assistance during the summer must pay the tutorial fee a second time before May 21st. The registration fee of \$10 and complete tutorial fees for the session should be sent to the Registrar together with the registration form supplied on request.

9. The tutorial fee for each Junior class and for Economics, Mental Philosophy, English History, Pass Botany, Pass Animal Biology, Pass Geology or Pass Mineralogy is \$3.

For each Senior class and for Politics, Moral Philosophy; or Modern History the fee is \$5.

For each Honour class or for each group or part of a group of Honour Mathematics the fee is \$5.

10. Students who have been granted any allowance on work already taken elsewhere must pay a *pro tanto* fee of \$10 with their first registration fee to have this allowance entered.

11. Students wishing to write on additional examinations in September may pay the tutorial fees for these subjects in April and receive tutorial assistance in them through the summer.\*

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\*It has been found impossible to arrange for tutorial assistance in either Mineralogy or Geology during the vacation months.



12. Attention is called to the fact that if assistance is required in any subject during the session and also during the summer months the tutorial fee must be paid twice.

13. Extra-mural students who enter at Christmas may have extra-mural fees applied on intra-mural charges and need then only pay the balance.

14. Cheques or Drafts will be received at par on any place where The Merchants' Bank of Canada has an agency, otherwise add 13 cents per \$100 to cover bank charges, or remit by Post-office or Express order.

15. On receipt of the proper fees a registration card and the first instalment of work to be done will be forwarded.

16. Extra-mural students must write the essays and exercises prescribed and send them at the dates specified. For information regarding essays and exercises, see the sections concerning extra-mural students in "Subjects of study for B.A. and M.A."

17. Students should address their work and all inquiries to "The Tutor in (whatever the subject may be), Queen's University, Kingston, Ont." Date of each essay or exercise coming in and of each returned criticism or fresh piece of work going out will be tabulated at the college office in order that all work may be traced.

List of centres where extra-mural examinations are held may be had on application to the Registrar. If for special reasons a candidate is unable to write at one of these, a new centre may be established on payment of a fee of \$5.00.

18. The University Examination fee of \$10 for Pass classes or \$12 for Honour (or Pass and Honour) classes must be paid to the Registrar in advance by all candidates wishing to take examinations.

Students applying to write at outside centres must send also \$1 for each half-day examination and \$1 for each oral examination, to remunerate presiding examiner.

Students must make application to the Registrar, at least three weeks before the beginning of the University examinations in April and September, for the papers on the particular subjects upon which they propose to write. Students wishing to have new examination centres established, or old centres re-established, must make application, accompanied by the fee, by March 1st for April examinations and by August 1st for September examinations.

19. Oral examinations in final Honour Moderns and Practical examinations in Science must be taken at the University.

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**ARTICLE VII.—PERCENTAGE REQUIRED.**

In determining a student's standing at the sessional examinations, the Professors in the different departments are empowered to take into account a student's entire class record.

To take Pass Standing, 40 per cent.

To take Third Class Honours, 50 per cent.

To take Second Class Honours, 66 per cent.

To take First Class Honours, 75 per cent.

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**ARTICLE VIII.—PASS COURSES LEADING TO DEGREE OF B.A.**

1. The course after Matriculation extends over four sessions, but students who are allowed four classes (see clause 6, article V) may complete their course in three years.

2. Students who desire to take an Honour course in Arts are advised to spend four years thereon from Senior Matriculation or five years from Junior Matriculation.

3. Junior matriculants must in the first year of their course choose their classes from the following list:

Junior Latin, Junior Greek, Junior German, Junior French, Junior English, Junior Mathematics, Junior Physics, Junior Chemistry, Botany, Animal Biology, Mineralogy.

4. Pass and Honour examinations are held annually in April and Pass examinations in September also.

5. The degree of B.A. will be conferred on candidates who take:

(a) Pass standing in the Pass classes and second or third class Honours in the Honour classes of any of the Honour courses, or

(b) Pass standing in the Pass classes and at least third class Honours in the Honour classes (if any) in either of the following Pass courses:

**COURSE I.**

A.—(1) Junior and Senior Latin.

(2) Junior and Senior Greek. (a) }

(3) Junior and Senior French. }

(4) Junior and Senior German. }

Any one.

B.—(1) Junior and Senior English.

(2) Mental and Moral Philosophy.

(3) English History or Economics.

(4) Junior Mathematics.

C.—Any two of the Junior Physics, Junior Chemistry, Botany, Animal Biology, Mineralogy, Geology, Junior Hebrew.

D.—Any two of the following:

(1) Any two not taken under B, of Modern History, English History, Economics, Politics.

(2) Junior and Senior Greek.\*

(3) Junior and Senior French.\*

(4) Junior and Senior German.\*

(5) Senior Hebrew.

(6) Any two of Senior Mathematics, Senior Physics, Senior Chemistry and the classes not taken in C.

(7) Any other two of those in (6).

(8) Preliminary Honours in either Latin, Greek, French, German, History, Philosophy, Political Science, Botany, Animal Biology, Chemistry, Mineralogy or Geology.

(9) Any other one of those in (8).

(10) Intermediate Honours in English.

(11) Honours in Mathematics, Group 1.

(12) Preliminary or Experimental Honour Physics.

(13) Final Honours (at least second class) in any class in (8), (10), (11).

(14) and (15) A general course in the Faculty of Education.

\*Only for those who have not taken them.

(a) Students taking Greek will be required to take only one of the classes in C.

## COURSE II.

A.—1. Junior Latin.

2. Junior Greek

3. Junior French.

4. Junior German.

} Any two.

B.—1. Junior and Senior English.

2. Mental and Moral Philosophy.

3. Junior and Senior Mathematics.

4. Junior Physics.

5. Junior Chemistry.

C.—Any two of: Botany, Animal Biology, Mineralogy, Geology, Senior Chemistry, Senior Physics.

D.—Any four of the following:—

(1) Senior Latin.

(2) Senior Greek.

(3) Senior French.

(4) Senior German.

(5) Junior Hebrew.

(6) English and Modern History.

- (7) Economics and Politics.
- (8) Moral Philosophy.
- (9)\* Any other two of those in C.
- (10) Any other two of those in C.
- (11) Preliminary Honours in either Political Science, Botany, Animal Biology, Latin, Greek, French, German, History, Philosophy, Chemistry, Mineralogy, or Geology.
- (12) Any other one in (11).
- (13) Any other one in (11).
- (14) Any other one in (11).
- (15) Intermediate Honours in English.
- (16) Honours in Mathematics, Group 1.
- (17) Preliminary, or Experimental Honour Physics.
- (18) Final Honours (at least second class) in any class in (11), (15), (16), or (17).
- (19) and (20) A general course in the Faculty of Education.

#### PASS COURSE III.

While the following course for the degree of B.A. is open to all undergraduates in Arts, it is specially recommended for those who intend to qualify as general assistant in a High School or as Principal of a Continuation Class School.

#### *Classes.*

- Junior and Senior English.
- Junior and Senior Latin.
- Junior and Senior Mathematics.
- Junior French.
- Senior French.
- Junior German.
- Senior German.
- Junior Physics.
- Junior Chemistry.
- Botany and Animal Biology.
- Geology.
- Mental and Moral Philosophy.
- English and Modern History.

#### COURSE IV.

*Course for B.A. leading to the Degrees of B.A. and M.D. in six years.*

Students will note that the combined B.A., M.D. course requires attendance for four sessions in order to comply with the regulations of the Ontario Medical Council.

- A.—1. Junior Latin
- 2. Junior Greek
- 3. Junior French.
- 4. Junior German.

- B.—1. Junior and Senior English.  
2. Mental or Moral Philosophy.  
3. Junior Mathematics.

- C.—1. Junior Physics and Junior Chemistry.  
2. Animal Biology and Medical Botany.  
3. Junior and Senior Materia Medica.  
4. Junior and Senior Anatomy.  
5. Senior Physiology and Histology.  
6. Senior Chemistry.

- D.—1. Preliminary Honour Chemistry.  
2. Preliminary Honour Animal Biology.

Examination on translation in French or German at end of second, third and fourth years. See page 82.)

6. No student is allowed to take a Senior class before passing the Junior in the same subject.

7. No student is allowed to attend or pass more than five classes in any one year. A sixth class may be added if it be a subject in which he has already failed.

8. Students should take the Pass classes in English, Classics, French, German and Mathematics in the first two years of their course.

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### SIX YEARS' COURSES, B.A. AND B.Sc.

Students taking these courses are required to register the first two years in Arts alone and pay the class and registration fees in Arts, to register the second two years in both Arts and Mining, to pay both registration fees and the Mining class fees and to register the last two years in Mining only, paying registration and class fees. Arts classes are subject to the regulations in the Arts calendar and Mining classes to the regulations in the Mining Calendar.

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### A.—MINING ENGINEERING.

#### FIRST YEAR.

Junior Latin.	} Any two.	Junior English.
Junior Greek.		Mathematics I.
Junior French.		Physics I.
Junior German.		



SECOND YEAR.

Senior English.	Mental Philosophy.	} Any one.
Junior Chemistry	Senior Latin.	
	Senior Greek.	
Mathematics II.	Senior French.	
Physics II.	Senior German.	

THIRD YEAR.

Economics.	} Any one.	
Modern History.		
Workshop I.		Senior Chemistry.
Drawing I.		Pass Mineralogy.
		Surveying I.

FOURTH YEAR.

Geology I.		
Preliminary Honour Chemistry.		General Engineering I.
Preliminary Honour Mineralogy.		Drawing II.
Descriptive Geometry.		Workshop II.
Surveying I.		

FIFTH YEAR.

Same as third year B.Sc. course.

SIXTH YEAR.

Same as fourth year B.Sc. course.

D.—CHEMICAL ENGINEERING.

FIRST YEAR.

Junior Latin.	} Any two.	Junior English.
Junior Greek.		Mathematics I.
Junior French.		Physics I.
Junior German.		

SECOND YEAR.

Senior English.		Mental Philosophy.	} Any one.
Junior Chemistry		Senior Latin.	
		Senior Greek.	
Mathematics II.		Senior French.	
Physics II.		Senior German.	

THIRD YEAR.

Economics.	} Any one.	
Modern History.		
Senior Chemistry.		Workshop I.
Surveying I.		Drawing I.
		Pass Mineralogy.

FOURTH YEAR.

Politics.	} Any one.	Qualitative Analysis.
Moral Philosophy.		Workshop II.
Preliminary Honour Latin.		General Engineering I.
Preliminary Honour French.		
Preliminary Honour German.		
Intermediate Honour English		Mechanical Drawing I.

FIFTH YEAR.

Same as third year B.Sc. course.

SIXTH YEAR.

Same as fourth year B.Sc. course.

**E.—CIVIL ENGINEERING.**

FIRST YEAR.

Junior Latin.	} Any two.	Junior English.
Junior Greek.		Mathematics I.
Junior French.		Physics I.
Junior German.		

SECOND YEAR.

Senior English.	} Any one.	Mental Philosophy.
Junior Chemistry		Senior Latin.
		Senior Greek.
Mathematics II.		Senior French.
Physics II.		Senior German.

THIRD YEAR.

Economics.	} Any one.	Senior Chemistry.
Modern History.		Pass Mineralogy.
Workshop I.		Surveying I.
Drawing I.		

FOURTH YEAR.

Geology I.	} Any one.	Politics.
Drawing II.		Moral Philosophy.
		Preliminary Honour Latin.
Workshop II.		Preliminary Honour French.
Descriptive Geometry.		Preliminary Honour German.
		Intermediate Honour English.
		Mapping I.
		General Engineering I.
		Surveying II.

FIFTH YEAR.

Same as third year B.Sc. course.

SIXTH YEAR.

Same as fourth year B.Sc. course.

F.—MECHANICAL ENGINEERING.

FIRST YEAR.

Junior Latin.	} Any two.	Junior English.
Junior Greek.		Mathematics I.
Junior French.		Physics I.
Junior German.		

SECOND YEAR.

Mental Philosophy.	} Any one.	Mathematics II.
Senior Latin.		Senior English.
Senior Greek.		Junior Chemistry.
Senior French.		
Senior German.		Physics II.

THIRD YEAR.

Economics.	} Any one.	
Modern History.		Senior Chemistry.
		Pass Mineralogy.
Workshop I.		Surveying I.
Drawing I.		

FOURTH YEAR.

	Workshop II,	
Drawing II, III, and IV.		Politics.
Descriptive Geometry.		Moral Philosophy.
		Preliminary Honour Latin.
		Preliminary Honour French.
General Engineering I.		Preliminary Honour German.
		Intermediate Honour English.

FIFTH YEAR.

Same as third year B.Sc. course.

SIXTH YEAR.

Same as fourth year B.Sc. course.

## G.—ELECTRICAL ENGINEERING.

### FIRST YEAR.

Junior Latin.	} Any two.	Junior English.
Junior Greek.		Mathematics I.
Junior French.		Physics I.
Junior German.		

### SECOND YEAR.

Senior English.	} Any one.	Mental Philosophy.
Junior Chemistry		Senior Latin.
Physics II, and III.		Senior Greek.
Mathematics II.		Senior French
		Senior German.

### THIRD YEAR.

Economics.	} Any one.	Senior Chemistry.
Modern History.		Surveying I.
Workshop I.		Pass Mineralogy.
Drawing I.		

### FOURTH YEAR.

Drawing II, III.	} Any one.	Politics.
Descriptive Geometry.		Moral Philosophy.
		Preliminary Honour Latin.
Workshop II.		Preliminary Honour French.
General Engineering I.		Preliminary Honour German.
		Intermediate Honour English.

### FIFTH YEAR.

Same as third year B.Sc. course.

### SIXTH YEAR.

Same as fourth year B.Sc. course.

## ARTICLE IX.—HONOUR COURSES.

1. *Students preparing for the position of High School Master are recommended to take one of the courses that qualify for Specialists' Certificates under Departmental Regulations.*

2. The degree of M.A. will be conferred on students who take Pass standing in the Pass classes and first class Honours in the Honour classes, in any one of the following courses.

3. The degree of B.A. will be conferred on candidates who take Pass standing in the Pass classes and second or third class Honours in the Honour classes of any one of the following courses:

4.—COURSE A.—LITERATURE AND PHILOSOPHY.

*Pass Classes.*

- |                                 |            |
|---------------------------------|------------|
| A.—1. Junior and Senior Latin.  |            |
| 2. Junior and Senior Greek. (a) | } Any one. |
| 3. Junior and Senior French.    |            |
| 4. Junior and Senior German.    |            |
| B.—1. Junior English.           | } Three.   |
| 2. Senior English.              |            |
| 3. Mental or Moral Philosophy.  |            |
| C.—1. Junior Mathematics.       | } One.     |
| 2. Animal Biology               |            |
| 3. Botany.                      |            |
| D.—1. Junior and Senior Greek.* | } Any two. |
| 2. Junior and Senior French.*   |            |
| 3. Junior and Senior German.*   |            |
| 4. Moral Philosophy             |            |
| 5. Economics and Politics.      |            |
| 6. English and Modern History.  |            |

*Honour Classes.*

- |  |            |
|--|------------|
| 1. Preliminary and Final Honour Latin.                 | } Any two. |
| 2. Preliminary and Final Honour Greek.                 |            |
| 3. Preliminary and Final Honour French.                |            |
| 4. Preliminary and Final Honour German.                |            |
| 5. Preliminary, Intermediate and Final Honour English. |            |
| 6. Preliminary and Final Honour History.               |            |
| 7. Preliminary and Final Honour Political Science.     |            |
| 8. Preliminary and Final Honour Mental Philosophy.     |            |
| 9. Preliminary and Final Honour Moral Philosophy.      |            |

(a) Students taking Greek will not be required to take the class in C.

5.—COURSE B.—MATHEMATICS AND PHYSICS.

*Pass Classes.*

- |                             |          |
|-----------------------------|----------|
| Junior English.             | } Seven. |
| Senior English              |          |
| Junior Mathematics.         |          |
| Senior Mathematics.         |          |
| Junior Physics.             |          |
| Senior Physics.             |          |
| Mental or Moral Philosophy. |          |

\*Only for those who have not taken them.



Modern History.	}	Any one.
Economics.		
Mental and Moral Philosophy.		
Junior Chemistry.		
Junior Latin.	}	Any two.
Senior Latin.		
Junior Greek.		
Senior Greek.		
Junior French.		
Senior French.		
Junior German.		
Senior German.		

One of the following Honour Groups:

1. Mathematics—Comprising Honour Mathematics, Preliminary Honour Physics and Practical Astronomy.

2. Physics—Comprising Preliminary and Final Honour Physics, subjects 1, 2, 3, 4, 5, 6, 7, 8 of Honour Mathematics, and Descriptive Astronomy.

#### 6.—COURSE C.—SCIENCE.

##### *Pass Classes.*

Junior English.	}	Nine.
Senior English.		
Junior Mathematics.		
Senior Mathematics.		
Mental Philosophy.		
Junior Physics.		
Senior Physics.	}	Any two.
Junior Chemistry.		
Senior Chemistry.		
Junior Latin.		
Senior Latin.	}	Any two.
Junior Greek.		
Senior Greek.		
Junior French.		
Senior French.		
Junior German.		
Senior German.		
Moral Philosophy.		

One of the following Honour Groups:

1. Preliminary and Final Honour Chemistry and Honour Experimental Physics.

2. Preliminary and Final Honour Chemistry, with either Preliminary and Final Honour Botany or Preliminary and Final Honour Animal Biology.

3. Preliminary and Final Honour Chemistry, Preliminary and Final Honour Geology, Preliminary and Final Honour Mineralogy.—Any two.

*Specialists' Courses.*

7. By agreement with the Education Department of Ontario, candidates taking an M.A. degree or B.A. with second class honours (sixty-six per cent.) in any of the following courses and attending not less than two full sessions will receive the nonprofessional qualification of Specialist.

8. The degree of M.A. will be conferred on students who take Pass standing in the Pass classes and first class Honours in the Honour classes in any one of the following courses.

9. The degree of B.A. will be conferred on candidates who take Pass standing in the Pass classes and second or third class Honours in the Honour classes of any one of the following:

COURSE I.—CLASSICS.

*Pass Classes.*

Junior and Senior Latin.

Junior and Senior Greek.

Junior and Senior English.

Mental or Moral Philosophy.

Junior Mathematics.

English History.

Junior Physics.

Junior Chemistry.

Pass Animal Biology.

} Any one.

*Honour Classes.*

Honour Latin, Preliminary and Final.

Honour Greek, Preliminary and Final.

Preliminary Honour Latin and Greek include the Roman and Grecian History.

COURSE II.—ENGLISH AND HISTORY (CLASSICS OPTION.)

*Pass Classes.*

Junior and Senior Latin.

Junior and Senior Greek.

Junior and Senior English.

Mental or Moral Philosophy.

Junior Mathematics.

English and Modern History.

Junior Physics.

Junior Chemistry.

Pass Animal Biology.

} Any one.

*Honour Classes.*

Honour English, Preliminary, Intermediate and Final.

Honour History, Preliminary.

Honour Greek, Preliminary.

Honour Latin, Preliminary.

COURSE III.—ENGLISH AND HISTORY (MODERNS OPTION.)

*Pass Classes.*

Junior and Senior Latin.

Junior and Senior French.

Junior and Senior German.

Junior and Senior English.

Junior Mathematics.

Modern and English History.

Mental or Moral Philosophy.

Junior Physics.

Junior Chemistry.

Pass Animal Biology.

} Any one.

*Honour Classes.*

English, Preliminary, Intermediate and Final Honours.

History, Preliminary Honours.

French, Preliminary Honours.

German, Preliminary Honours.

COURSE IV.—FRENCH AND GERMAN.

*Pass Classes.*

Junior and Senior Latin.

Junior and Senior French.

Junior and Senior German.

Junior and Senior English.

Junior Mathematics.

English and Modern History.

Junior Physics.

Junior Chemistry.

Pass Animal Biology.

} Any one.

*Honour Classes.*

English, Intermediate Honours.

French, Preliminary and Final Honours.

German, Preliminary and Final Honours.

COURSE V.—MODERNS, (ENGLISH, FRENCH AND GERMAN), AND HISTORY.

*Pass Classes.*

Junior and Senior Latin.

Junior and Senior German.

Junior and Senior French.

Junior and Senior English.  
Junior Mathematics.  
Mental and Moral Philosophy.  
English and Modern History (Honour standing required).  
Junior Physics. }  
Junior Chemistry. } Any one.  
Pass Animal Biology. }

*Honour Classes.*

Honour English, Preliminary, Intermediate and Final A.  
Honour German, Preliminary and Intermediate.  
Honour French, Preliminary and Intermediate.

COURSE VI.—MATHEMATICS.

*Pass Classes.*

Junior Latin.  
Junior French, German or Greek.  
Junior and Senior English.  
Mental or Moral Philosophy.  
Junior and Senior Physics.  
Junior and Senior Mathematics.

*Honour Classes.*

Preliminary Honour Physics, with Practical Astronomy.  
Honour Mathematics.

COURSE VII.—MATHEMATICS AND PHYSICS.

*Pass Classes.*

Junior Latin.  
Junior French, German or Greek.  
Junior and Senior English.  
Mental or Moral Philosophy.  
Junior and Senior Physics.  
Junior and Senior Mathematics.

*Honour Classes.*

Preliminary Honour Physics, with Descriptive Astronomy.  
Final Honour Physics.  
Honour Mathematics, No. 1, 2, 3, 4, 5, 6, 7, 8.

COURSE VIII.—SCIENCE.

*Pass Classes.*

Junior Latin.  
Junior French, German or Greek.  
Junior and Senior English.

Junior and Senior Mathematics.

Junior and Senior Physics.

Junior and Senior Chemistry.

Pass Botany.

Pass Animal Biology.

Pass Mineralogy.

Pass Geology.

*Honour Classes.*

Preliminary Honour Chemistry.

Preliminary Honour Botany.

Preliminary Honour Animal Biology.

Together with any one of the following groups:

- (a) Final Honour Botany and Final Honour Animal Biology.
- (b) Experimental Honour Physics and Final Honour Chemistry.
- (c) Final Honour Chemistry and Preliminary and Final Honour Mineralogy.
- (d) Preliminary Honour Mineralogy and Preliminary and Final Honour Geology.



## ARTICLE X.

### SUBJECTS OF STUDY FOR B.A. AND M.A. DEGREES. LATIN.

PROFESSOR—William B. Anderson, M.A. (Aberd., Cantab.)

ASSISTANT PROFESSOR—George W. Mitchell, M.A.

FELLOW—T. S. Duncan, M.A.

TUTORS—W. D. Lowe, M.A., C. R. Graham.

#### PREPARATORY CLASS.

This class will read the texts prescribed for Junior Matriculation, 1909. For grammar and composition Mitchell's *Introduction to Latin Prose* will be used.

#### JUNIOR CLASS.

Translation from the books specified below, with questions on grammar and subject matter; for grammatical study Postgate's *New Latin Primer* is recommended.

Translation at sight from Jerram's *Anglice Reddenda*, Second Series, (Clarendon Press).

Latin Prose Composition based on the books read and on Mitchell's *Introduction to Latin Prose*.

Roman History, from 289 to 78 B.C. (Shuckburgh's *History of Rome for Beginners* is recommended).

Roman Antiquities (Wilkins' Primer).

Translation of simple Latin at sight.

Livy, Book IX (Anderson: Pitt Press\*).

Vergil, *Aeneid IX* (Stephenson or Sidgwick).

#### SENIOR CLASS.

Translation from the books specified below, with questions on grammar and subject matter; for grammatical study Postgate's *New Latin Primer* is recommended. Translation at sight from Jerram's *Anglice Reddenda* (Second Series), and Prose composition based on the books read and on North and Hillard's *Latin Prose Composition*.

Roman History from 509 to 23 B.C. (Shuckburgh's smaller History is recommended).

Latin Literature, the Ciceronian and Augustan periods (Mackail).

Cicero, *Pro Archia* (Reid); *Somnium Scipionis* (Pearman, Pitt Press).

Tacitus, *Agricola* (Church and Brodribb or Gudeman).

Vergil, *Aeneid I* (Sidgwick, or Page's larger edition of Books I-VI).

#### HONOURS.

Candidates for Preliminary and Final Honours should note that much importance is attached to Composition and Translation at sight. The Roman

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\*To be published about September, 1908.

History required from candidates for Specialist certificates is included in the Preliminary Honour examination, and must be taken. The course embraces the History and Literature of Rome to the death of Marcus Aurelius. Lectures are given on this and on such subjects as Syntax, the History of the Language, Textual Criticism, and Roman Philosophy. The Histories of Rome by Wells, How and Leigh, and Pelham, Bury's *Roman Empire*, Mac-kail's *Latin Literature* and Tyrrell's *Latin Poetry* will be found useful.

The Final Honours course will include Roman Epigraphy and the study of a limited period of History with original authorities; students taking this course should provide themselves with Rushforth's *Latin Historical Inscriptions* and with Cagnat's *Cours d'Épigraphie latine* or Egbert's *Introduction to the Study of Latin Inscriptions*.

#### LATIN WORKS PRESCRIBED.

(Stress is laid on the literary qualities of the books, on important textual questions, and on points of interpretation, history or archæology arising from the subject matter.)

#### PRELIMINARY SECTION.

Plautus, *Rudens* (Sonnenschein, smaller edition).

Cicero, *Philippics V, VI* (Brighthouse), *Cicero in his Letters*, ed. by Tyrrell (Macmillan), I-XL.

Vergil, *Eclogues* I, IV, X; *Georgics* I and II; *Aeneid* II, IV, IX. Students should provide themselves with complete editions (Page's or Sidgwick's) of the *Eclogues*, *Georgics* and *Aeneid*.

Horace, *Odes III, Epistles II*, excluding *Ars Poetica* (Page, Palmer and Wilkins in one vol., Macmillan).

Lucan IX (Teubner text).

Tacitus, *Annals*, Book I (Furneaux).

Pliny, *Epistles*, Book VI (Duff).

#### Final.

(To be taken at least one year later than the Preliminary Section.)

Plautus, *Rudens* (Sonnenschein, smaller edition).

Terence, *Adelphi* (Ashmore).

Cicero, *Brutus* (Kellogg), *Letters* (Tyrrell).

Vergil, *Eclogues*, except II and III; *Georgics* I, IV; *Aeneid* I, IV, IX, XII.

Horace, *Epistles*, including *Ars Poetica*.

Lucan IX.

Quintilian, Book X (Peterson, smaller edition).

Tacitus, *Annals*, Book I (Furneaux).

Pliny, *Epistles*, Book VI (Duff).

Crowell's *Selections from the Latin Poets*; extracts from Catullus.

#### GENERAL NOTICE TO LATIN STUDENTS:

Members of the Latin classes should provide themselves with a Classical Dictionary (Smith's *Smaller Classical Dictionary*, or Harper's or Seyffert's Classical Dictionary), and also with a Classical Atlas (Murray's is recommended) or at least with a map of ancient Italy (in Murray's series of *Handy Classical Maps*). In *Gow's Companion to School Classics* (Macmillan) will be found an excellent summary of many things which the student of Latin ought to know.

#### NOTICE TO EXTRA-MURAL STUDENTS:

Extra-mural courses, Junior, Senior, and Honours, will be conducted during the winter session. There will also be Junior and Senior courses in the summer session, under the direct supervision of one of the professors, in which all the work in Composition necessary for the Supplemental Examinations in September will be covered.

Instructions and advice will be sent to all students as soon as they register.

N.B.—It is absolutely necessary that all the prescribed exercises be sent in regularly.

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#### GREEK.

PROFESSOR—T. Callander, M.A. (Aberd. Oxon.)

ASSISTANT PROFESSOR—G. W. Mitchell, M.A.

TUTOR—C. J. Burns, M.A.

#### JUNIOR CLASS.

Greek Grammar (Goodwin).

Translation from authors not specified.

Goodwin's *Greek Reader*.

Homer, *Odyssey*, XI (Merry).

#### SENIOR YEAR.

Thucydides I (Macmillan).

Homer, *Iliad* I, III, *Odyssey* IX (Merry).

The Epistle to the Galatians.

Greek Grammar and Composition.

Translation from authors not specified.

For general reading:

Jebb, *Primer of Greek Literature* and *Introduction to Homer*.

Maisch, *Greek Antiquities* (Temple Primers).

Bury, *School History of Greece*.

#### HONOURS.

Candidates for Preliminary and Final Honours in Greek should note that special stress is laid on Composition and Unseen Translation. Passages will

also be set for translation from the books specified below. The Greek History required from candidates for Specialist Certificates is included in the Preliminary Honour examinations and must also be taken.

Books recommended:

- Murray, *Greek Literature*.
- Goodwin, *Greek Grammar*.
- Holm, *History of Greece*.
- Bury, *History of Greece*.
- Hogarth, *Philip and Alexander*.
- Schuchhardt, *Schliemann's Excavations*.
- Jebb, *Influence of Classical Greek Poetry*.
- Butcher, *Some Aspects of the Greek Genius*.
- Harvard Lectures on Greek Subjects*.
- Gilbert, *Greek Constitutional Antiquities*.

Instead of the editions mentioned below students may find it convenient to use the Teubner series.

*Preliminary.*

(The examination in this class must be taken at least one year before the final examination.)

- Thucydides I (Marchant, Macmillan).
- Plutarch, *Pericles*.
- Homer, *Iliad I-IV, Odyssey V-XII* (Merry).
- Euripides, *Bacchae* (Tyrrell, Macmillan).
- Sophocles, *Oedipus Tyrannus* (Jebb).
- Aristophanes, *Frogs* (Merry).
- Greek Grammar and Composition.

*Final.*

- Herodotus I, II.
- Thucydides I, II.
- Demosthenes, *De Corona* (Goodwin).
- Plato, *Republic V, VI, VII* (Adam).
- Aristotle, *Ethics I*.
- Plutarch, *Themistocles, Pericles*.
- Homer, *Odyssey I-XII, Iliad I-VI*.
- Aeschylus, *Agamemmon* (Sidgwick).
- Prometheus* (Sikes & Willson).
- Sophocles, *Oedipus Coloneus, Antigone* (Jebb).
- Euripides, *Bacchae* (Tyrrell).
- Aristophanes, *Knights, Frogs* (Merry).
- Pindar, *Olympians* (Gildersleeve).
- Theocritus, *Selections*.

Those who wish to combine Honour Greek with Honours in Philosophy may substitute for the study of *Hegel* either the *Republic of Plato* or *The*

*Nicomachean Ethics of Aristotle.* In that case certain texts in the above list for Final Honours will be cancelled, namely *Demosthenes*, *Plutarch* and *Theocritus*.

N.B.—EXTRA-MURAL STUDENTS:

The work is the same as that prescribed for intra-mural students. To each student registered in Junior or Senior Greek a paper of general instructions will be sent, along with a list of exercises in Unseen Translation and Prose Composition. These exercises must be done regularly and with the greatest possible care. Juniors should procure *Pitman's* Greek Prose Composition (Macmillan), and Seniors a book on the same subject by *North and Hillard* (Messrs. Rivington), without delay. Extra-mural students in Honours will receive direction individually.

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## GERMAN LANGUAGE AND LITERATURE.

PROFESSOR—J. Macgillivray, Ph.D. (Leipsic).

ASSISTANT PROFESSOR—E. W. Patchett, B.A.

TUTOR—W. J. Feasby, B.A.

### JUNIOR CLASS.

The following works are to be translated and studied:

Baumbach, Neue Märchen (Hans Taps; Die Königstocher, die nicht weinen konnte; Entenschnabel; Der Esel und der Kritiker; Eine Weinachtsgeschichte; Der Besuch im Himmel).

Möbius, Götter- und Heldensagen I.

Carmen Sylva, Ein Gebet.

Benedix, Die Hochzeitsreise (Heath & Co.).

Fulda, Das Verlorene Paradies (Ginn & Co.).

Günther, Deutsche Kulturgeschichte, 1-50 (Sammlung Göschen).

Grammar (Duerr), Essentials of German Grammar.

Writing German from Dictation, and Sight Translation.

Oral and Written Composition, based on the above works.

### SENIOR CLASS.

The following works are to be studied:

Möbius, Götter- und Heldensagen I, II, III.

Baumbach, Neue Märchen.

Paul Heyse, Der Verlorene Sohn.

Theodor Storm, Der Schimmelreiter (Ginn & Co.).

Fulda, Der Talisman (Holt & Co.).

Uhland, Balladen (Balladenbuch, Macmillan & Co.).

Goethe, Balladen (Macmillan & Co.).

Günther, Deutsche Kulturgeschichte, 1-89.

Achelis, Sociologie, 1-49 (Sammlung Göschen).



Translation from authors not specified. Writing German from dictation.

Oral and Written composition and Translation into German, based on the above works.

B.A. AND M.D. COURSE.

*German for Translation* at the end of the second, third and fourth year of the course leading to B.A. and M.D. in Six years.

*Text-Book: Macmillan's German Science Reader.*

II YEAR—Chemie, Physik.

III YEAR—Geologie, Mineralogie.

IV YEAR—Astronomie, Anatomie.

HONOURS.

The examination in Preliminary Honours must be passed at least one year before the Intermediate, or the Intermediate and Final Examination.

*Preliminary.*

Baumbach, Neue Märchen.

Heyse, Novellen, 8ter Band V., Herz ed. (Vetter Gabriel, Der Verlorene Sohn, Am Totensee, Annina, Auf der Alm).

Storm, Der, Schimmelreiter.

Schiller, Wilhelm Tell.

Goethe, Faust I, Gedichte III (Holt & Co., Göbel).

Lessing, Emilia Galotte.

Günther, Deutsche Kulturgeschichte (Sammlung Göschen).

Achelis, Sociologie, 1-85 (Sammlung Göschen).

Koch, Geschichte der deutschen Literatur, III (Sammlung Göschen).

Deutsche Grammatik und kurze Geschichte der deutschen Sprache (Lyon, in Sammlung Göschen).

Writing German from Dictation.

Oral and Written Composition based on the above works.

*Intermediate.*

(Any group may be taken).

A.

Lessing, Emilia Galotti, Nathan der Weise.

Goethe, Faust I, Iphigenie, Gedichte III, V (Göbel).

Schiller, Maria Stuart, Wilhelm Tell, Balladen (Balladenbuch).

Scheffel, Ekkehart.

Paul Heyse, Novellen, 8ter Band V.—Herz, ed. (Vetter, Gabriel, Der Verlorene Sohn, Am Totensee, Annina, Auf der Alm).

Frenssen, Jörn Uhl.

Baumbach, Neue Märchen.

Koch, Geschichte der Deutschen Literatur.

Written and Oral Composition.

B.

Lessing, Emilia Galotti, Nathan der Weise.  
Goethe, Faust I, Iphigenie, Gedichte III, V.  
Schiller, Maria Stuart, Wilhelm Tell, Balladen (Balladenbuch).  
Frenssen, Jörn Uhl.  
Achelis, Sociologie.  
Elsenhans, Psychologie.  
Gunther, Deutsche Kulturgeschichte  
Koch, Geschichte der Deutschen Literatur. } (Sammlung Göschen).  
Oral and Written Composition.

C.

Lessing, Emilia Galotti, Nathan der Weise.  
Goethe, Faust I, Iphigenie, Gedichte III, V (Göbel).  
Schiller, Maria Stuart, Wilhelm Tell, Balladen (Balladenbuch).  
Scheffel, Ekkehart.  
Frenssen, Jörn Uhl.  
Lyon, Geschichte der Deutschen Sprache.  
Braune, Gothische Grammatik, Ulfilas—Mattäus V.  
Wright, Old High German Primer—Muspili.  
Clother, Des Nibelungenlied in Auswahl, I-III.  
Koch, Geschichte der Deutschen Literatur.  
Oral and Written Composition.

*Final.*

Any group may be taken.

A.

Lessing, Minna von Barnhelm, Emilia Galotti, Nathan der Weise.  
Goethe, Faust I, II (Selections), Iphigenie, Tasso, Gedichte (Göbel).  
Schiller, Wallenstein, Maria Stuart, Wilhelm Tell, Balladen (Balladenbuch).  
Scheffel, Ekkehart.  
Freytag, Soll and Haben.  
Paul Heyse, Novellen (Vetter Gabriel, Der Verlorene Sohn, Am Totensee, Annina, Auf der Alm).  
Frenssen, Jörn Uhl.  
Baumbach, Neue Märchen.  
Koch, Geschichte der Deutschen Literatur.  
Oral and Written Composition.

B.

Lessing, Minna von Barnhelm, Emilia Galotti, Nathan der Weise.  
Goethe, Faust I, II (Selections), Iphigenie, Tasso, Gedichte (Göbel).  
Schiller, Wallenstein, Maria Stuart, Wilhelm Tell, Balladen.  
Scheffel, Ekkehart.

Frenssen, Jörn Uhl.  
Achelis, Sociologie.  
Elsenhans, Psychologie und Logik.  
Gunther, Deutsche Kulturgeschichte.  
Koch, Geschichte der Deutschen Literatur.  
Oral and Written Composition.

C.

Lessing, Minna von Barnhelm, Emilia Galotti, Nathan der Weise.  
Goethe, Faust I, II (Selections), Iphigenie, Tasso, Gedichte (Göbel).  
Schiller, Wallenstein, Maria Stuart, Wilhelm Tell, Balladen.  
Scheffel, Ekkehart.  
Paul Heyse, Novellen (Am Totensee, Annina, Auf der Alm).  
Frenssen, Jörn Uhl.  
Behagel, Geschichte der Deutschen Sprache.  
Braune, Gotische Grammatik, Ulfilas—Mattäus V, VI.  
Wright, Old High German Primer, Muspili, Ludwigslied, Otfried  
(Selections).  
Clother, Das Nibelungenlied in Auswahl I-V.  
Koch, Geschichte der Deutschen Literatur.  
Oral and Written Composition.

EXTRA-MURAL STUDENTS.

The work for extra-mural students, pass and honour, is the same as for intra-murals. Exercises and subjects for composition will be prescribed throughout the session. Competent oral instruction should be secured on the spot.

NOTE.—No candidate can pass any examination in German, Pass or Honour, who has not made the required standing in each of the essential parts of the examination, i.e., in Pass: Translation into English, Translation into German and Composition, Literature, Pronunciation and Dictation; in Honours, as in Pass, with the addition of philology (in C.) and Orals.

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ROMANCE LANGUAGES AND LITERATURE.

PROFESSOR—P. G. C. Campbell, M.A. (Oxon.).

ASSISTANT PROFESSOR—E. W. Patchett, B.A. (Cambridge).

TUTORS—W. M. Hay, B.A., Miss Helen MacIntosh, M.A.

FRENCH.

*Note for all classes:*—No good work in French can be done without a large dictionary. Small pocket editions are worse than useless. One written entirely in French is best, and "Le Petit Larousse Illustré, while recommended for all classes, is indispensable for Honour students.

JUNIOR CLASS.

Works to be studied:—

Chateaubriand—Mémoires d'Outre Tombe (Clarendon Press).

Labiche—Le Voyage de M. Perrichon (Heath & Co.).

De Vigny—La Canne de Jonc (Pitt Press).

Anon—La Main Malheureuse (Heath & Co.).

Lamartine—Le Manuscrit de ma Mère (Edward Arnold).

Contes et Nouvelles (Hachette & Co.).

Grammar treated by the Inductive Method.

Writing French from Dictation.

Translation into French and Essays based on the works read.

NOTE.—Elementary classes are held twice a week for those who have done but little French, fee \$3.

SENIOR CLASS.

Works set for study:—

Cameron—Tales of France (American Book Co.).

Balzac—Cinq Scènes de la Comédie Humaine (Heath & Co.).

Victor Hugo—La Chute (American Book Co.).

Mérimée—Colomba (Holt & Co.).

Foncin—Le Pays de France (Armand Colin).

Augier—Le Gendre de M. Poirier (Heath & Co.).

The outlines of French Literature. Text-book: Rosey, "French Literature" (Blackie).

A thorough study of Grammar and Syntax, treated by the Inductive Method.

Unseen Translation.

Translation into French Prose. Text-book, "French Prose Composition for Middle Forms"—Duhamel & Minssen (Rivingtons).

Writing French from Dictation.

Essays—Nov. 30th, The French National Character.

Feb. 18th, to be written in French, The Future of Canada.

N.B.—All students, in order to be admitted to examination must write both the prescribed essays and at least 50 per cent. of the Proses set.

SCIENTIFIC FRENCH.

For those who have taken the Junior French in the combined B.A. and M.D. courses the work in the next three years for examination will be prescribed texts, viz.:—

II YEAR—Le Gendre de M. Poirier.

Herdler's "Scientific French Reader," pp. 1-86 (Ginn & Co.).

Unseen Translation of a scientific character.

III YEAR—Herdler's "Scientific French Reader."

Unseen Translation of a scientific character.

IV YEAR—"Lectures Scientifiques" (Rivingtons).

Unseen Translation of a scientific character.

### HONOURS.

Students are strongly advised to study the Examination Papers of the last six years, as affording some guide to their own studies.

The "Wellington College French Grammar," by Eve & De Baudiss (published by D. Nutt), is highly recommended to all Honour students.

In Literature the following subjects will be specially studied during the year: Fine Art as Imitation; French Versification; the French Character; Italian and Spanish Influences; Voltaire; Rousseau; Beaumarchais. On the first named subject consult Butcher's edition of Aristotle's Poetics, esp. chap. II, and Courthope "Law in Taste," Lecture II.

#### *Preliminary.*

(The examination in this class must be attempted at least one year before the Intermediate and Final examination.

#### TEXTS:—

\*Montaigne—Essais. De l'institution des enfants, Du pédantisme, De l'amitié, De la vanité des paroles.

Corneille—Horace.

Racine—Andromaque.

\*Molière—Le Misanthrope.

Voltaire—Histoire de Charles Douze.

De Musset—Trois Comédies (Heath & Co.), viz.:—

Fantasio. On ne badine pas avec l'amour. Il faut qu'une porte soit ouverte ou fermée.

Victor Hugo—\*Hernani.

Balzac—Eugénie Grandet (Holt & Co.).

Sainte-Beuve—Selected Essays (Ginn & Co.), viz.: Chateaubriand,

Mme. Récamier, Qu'est-ce qu'un Classique? Roman de Renart,

A. de Musset, Histoire de l'Académie Française.

\*Loti—Pêcheur d'Islande.

Unseen Translation.

Writing from Dictation.

TRANSLATION INTO FRENCH PROSE. Text-book: Duhamel—"Advanced French Prose Composition" (Rivingtons).

THE HISTORY OF FRENCH LITERATURE with special reference to the 17th, 18th and 19th centuries.

Text-book: Petit de Julleville—Leçons de Littérature Française.

Consult: The various studies of Sainte Beuve.

Brunetière—Manuel de l'Histoire de la Littérature Française.

THE THEORY OF PHONETIC CHANGE and History of the French Language—a course of 24 lectures—for intra-mural students only.

COMPOSITION IN FRENCH—Subjects for 1907-1908:—

Nov. 17th, The Provincial types of character in France.



Dec. 13th, Compare the use made by Corneille and Racine of History.

Feb. 10th, The conception of Love in De Musset.

*Final Honours.*

SECTION A.—THE LANGUAGE.

1. Translation into French Prose.
2. Unseen Translation from French Authors.
3. Free Composition in French.
4. Writing French from Dictation. (Intra-mural students will be examined during the term.)
5. Oral Exercises in French.
6. A general knowledge of Grammar, Syntax and Idioms.

SECTION B.—LITERATURE.

1. The History of the French Literature; with a special study of particular periods and authors.

For 1908-9 see subjects given at the beginning of the prescription for Honours.

2. The Principles, in outline, of Literary Criticism applied to French Literature.

Consult: Aristotle's "Poetics" (ed. by Butcher), The Essays.  
Courthope, "Life in Poetry, Law in Taste."

3. Texts prescribed for translation and study:

Cent. XVI.—\*Montaigne—Essais. De l'institution des enfants, Du Pédantisme, De l'amitié, De la vanité des paroles.

Cent. XVII.—Corneille—Horace, Le Cid.

Molière—\*Le Misanthrope. Les Précieuses Ridicules.  
L'Avare.

Racine—Andromaque.

\*Boileau—L'Art Poétique, Canto I.

Cent. XVIII.—Beaumarchais—Le Barbier de Séville.

Chateaubriand—Atala, René.

Voltaire—Mérope. Histoire de Charles Douze.

Cent. XIX.—Victor Hugo—Hernani. Quatre-Vingt-Treize. \*Les Orientales.

Balzac—Eugénie Grandet (Holt & Co.).

De Musset—Trois Comédies (Heath & Co.).

Sainte Beuve—Selected Essays (Ginn & Co.).

\*Taine—L'Ancien Régime.

Loti—Pêcheur d'Islande (W. R. Jenkins).

\*Brunetière—Époques du Théâtre Français.

Rostand—Cyrano de Bergerac.

SECTION C.—PHILOLOGY.

1. The General Theory of Phonetic Change.
2. The History and Development of the French Language.  
Introductory Text-book—Clédat—Grammaire élémentaire de la vieille langue française.
3. The Grammar of Old French.
4. The Study of Old French Texts.  
\*Text: Léon Gautier—La Chanson de Roland.

Consult for reference:—

Nyrop—"Grammaire Historique de la Langue Française."  
Gröber—"Grundriss von Romanischer Philologie."  
Meyer Lübke—"Grammaire des Langues Romanes."  
Clédat—"Nouvelle Grammaire Historique."

ESSAYS for 1907-8 for all Final Honour students:

Nov. 3rd—The style of Voltaire.

Dec. 1st—The Weaknesses of the French Drama.

Jan. 28th—Discuss the lines of Boileau, A. P. I, 37-8,  
Aimez donc la raison; que toujours vos écrits,  
Empruntent d'elle seule et leur lustre et leur prix.

Mar. 1st—*Ennui* as a characteristic of the French.

These essays to be written in French.

NOTE on Specialist Course V.—Those taking this course must, in French, take Section A, and *either* Section B or Section C.

ITALIAN.

(Italian is not obligatory for any course save for Ph.D. work.)

Voluntary classes are held. No fee. Tickets to be obtained from the Registrar.

FIRST YEAR—Grammar—(Grandgent)..

Unseen Translation.

De Amicis—Il più bel Giorno della Vita.

Dante—Inferno I-II.

SECOND YEAR—Translation into Italian (Grandgent's Italian Composition).

History of Italian Literature (Snell's Primer of Italian Literature).

Dante—Inferno I-X.

Tasso—La Jerusalem Liberata I-II.

Del Testa—Le Conscienze Elastiche.

Carcano—La Nunziata.

Unseen Translation.

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\*To be specially studied in class.

### SPANISH.

Valera—El Pájaro Verde (Ginn & Co.).  
Moratin—El si de las Ninas (Ginn & Co.).  
Alarcón—El Capitán Veneno (Heath & Co.).  
Calderon—La Vida es Sueno (Heath & Co.).  
Cervantes—Don Quixote (Heath & Co.).  
Edgren's Grammar (Heath & Co.).  
Ford's Composition (Heath & Co.).  
Writing Spanish from Dictation.  
Outline of the History of the Literature.

#### *Instructions for Extra-Mural Students.*

Extra-mural students should obtain competent teachers for oral instructions *as no candidate will be accepted who fails in the oral examination*. Pass candidates may take the oral examination at outside centres, provided an examiner approved by the Senate be obtained; but Final Honour candidates must pass their oral examinations at the University.

No extra-mural student will be admitted to examination, unless he has written all the prescribed essays and at least 50 per cent. of the prescribed Proses.

#### NOTES FOR DIFFERENT CLASSES:

1. *Junior*. Students on registering will receive instructions as to the prescribed Proses and the two Essays set.

The prescribed text-book for Prose is Grandgent's "French Composition" (Heath & Co.).

2. *Senior*. The work prescribed is precisely the same as for intra-mural students. Revision papers on all the set books are sent from time to time.

3. *Preliminary Honours*. Instead of the Paper on Phonetics, extra-mural students will be set a general paper on Grammar, Syntax and Idioms; see the papers set for the last three years.

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### ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR—James Cappon, M.A.

ASSISTANT PROFESSOR—John Marshall, M.A.

LECTURER—John F. Macdonald, M.A.

TUTOR—A. W. Baird, M.A.

#### JUNIOR CLASS.

1. Practical course in Rhetoric and Composition.

(a) General Theory and illustrations.

(b) Exercises on the above, with essays.

2. Study of Prose Authors in selected passages. Development of English Prose as illustrated by Bacon, Addison, Johnson, Macaulay, Ruskin, Carlyle, Huxley, Arnold, and others.

Text-book for this course: Model English Prose (Macmillan & Co.).

3. A detailed study in the class of the following:

Chaucer, Prologue to Canterbury Tales. (The descriptions of the Knight, Squire, Prioress, Monk, Student, Merchant, Franklin, Shipman, Parson).

Shakespeare, Merchant of Venice.

Longfellow, Prelude, Nuremberg, The Belfry of Bruges, The Skeleton in Armour, Amalfi, The Village Blacksmith, The Day is Done, The Secret of the Sea.

Tennyson, The Palace of Art, The Lady of Shalott, "Love Thou Thy Land," The Lord of Burleigh.

Wordsworth, Ruth, Fidelity, The Two Voices, Lines Written near Tintern Abbey.

SENIOR CLASS.

I.

Course in Historical Development of Poetic Literature.

(a) Anglo-Saxon Origins.

The Poetry of Chaucer.

The Ancient and Modern Ballad.

History of the Sonnet.

Origin of the English Drama.

Development of Blank Verse.

Literary Characteristics of the 18th Century.

The School of Dryden and Pope.

Development of the Rhymed Couplet.

(b) Specimens to be read in connection with the above course:

From Chaucer's Prologue (The Knight, the Squire, the Prioress, the Monk, the Clerk of Oxford, the Franklin, the Parson).

Ballads, Sir Patrick Spens, Chevy Chase, Jamie Telfer, Coleridge's Ancient Mariner, Scott's Eve of St. John, Wordsworth's Ruth.

Sonnets, "Milton! thou should'st be living at this hour" (Wordsworth), "Scorn not the Sonnet; Critic, you have frowned" (Wordsworth).

Dryden, Epistle to Mr. Congreve, The Descriptions of Achitophel and Zimri in *Absolom and Achitophel*.

Pope, Epistle to Arbuthnot (Satires).

Gray, Elegy, The Progress of Poesy.

Johnson, Vanity of Human Wishes.

Goldsmith, The Deserted Village.

Consult Gosse, Eighteenth Century Literature, Chaps. I, III, IV and IX, X, XI.

II.

Shakespeare, Hamlet.

Milton, Paradise Lost, Book I.

Wordsworth, Song at the Feast of Brougham Castle, Lines written near Tintern Abbey.

Keats, Ode to the Nightingale.

Browning, A Grammarian's Funeral, Abt. Vogler, a Toccata of Galuppi's.

### III.

Macaulay, Boswell's Life of Johnson.

Carlyle, Essay on Burns.

Matthew Arnold, Essay on Wordsworth.

### IV.

Lectures on the History of the English Language.

From Morris and Skeat's Specimens of Early English, Part II, the extract from Robert of Gloucester.

### HONOURS.

#### *Preliminary.*

1. Anglo-Saxon:—(Sweet's Anglo-Saxon Reader).

Alfred's Preface to the *Cura Pastoralis*.

Alfred's Translation of Boethius.

Alfred's Translation of Beda (Account of the Poet Caedmon).

Aelfric's Assumption of St. John.

Aelfric's Life of King Oswald.

Extract from the Boewulf, lines 1-150.

The Battle of Maldon.

2. Skeat, Principles of English Etymology (Chaps. VII, X, XI, XVIII, XIX, XXI).

For extra-mural students: O. F. Emerson's History of the English Language (Macmillan & Co.).

3. Ten Brink, Early English Literature, Book I.

Morris & Skeat, Specimens of Early English, Part II, Extracts I and VII.

#### *Intermediate.*

Cowper, Table Talk, Progress of Error, Task, Book I.

Wordsworth, The Prelude, Books I, II, III, IV; the following poems from "Lyrical Ballads": The Thorn, Simon Lee, The Last of the Flock, The Idiot Boy, Expostulation and Reply, The Tables Turned, The Complaint of a forsaken Indian Woman, Lines Written near Tintern Abbey, Hart Leap Well, There Was a Boy, Lucy Gray, Ruth, Lines Written upon a Tablet, The Two April Mornings, Nutting, Three Years She Grew, The Old Cumberland Beggar, Michael; the poems published as "Memorials of a Tour in Scotland (1803)"; the poems "dedicated to National Independence and Liberty," Yew Trees,



She was a Phantom of Delight, I Wandered Lonely as a Cloud, Song at the Feast of Brougham Castle, Laodamia, Dion, Peter Bell, Fidelity, Ode to Duty, Character of the Happy Warrior, Ode on Immortality, Excursion Book I.

Keats, Ode on a Grecian Urn, Ode to a Nightingale, Isabella, Lamia.

Byron, Bride of Abydos, Childe Harold, Canto I-III.

Tennyson, Ulysses, Morte d'Arthur.

Clough, The Bothie, Through a Glass Darkly, Ah! Yet Consider it again, Qua Cursum Ventus.

Browning, (a) The Grammarian's Funeral, Andrea Del Sarto, Fra Lippo Lippi, Pictor Ignotus, The Bishop Orders His Tomb, Bishop Blougram, How it strikes a Contemporary, Epistle of Karshish, Cleon; (b) Abt Vogler, Rabbi Ban Ezra, A Toccata of Galuppi's, The Laboratory, The Glove, Dis Aliter Visum, Youth and Art, Waring, The Englishman in Italy, Old Pictures, in Florence.

Arnold, on Translating Homer, Essays on Wordsworth and Byron, Essay on Poetry, (Essays in Criticism, Second Series), Culture and Anarchy, Chap. III.

Carlyle, Sartor Resartus, Book I, Chaps. I, III, IV; Book II, Chaps. I, II, III, V, VII, VIII, IX; Book III, Chaps. III, IV, V, VII, VIII; Past and Present (Chapters: Phenomena, Mammonism, Dilettantism, Labour, Reward, Democracy).

Ruskin, On Geneva.

Gibbon's Rome, Chap. XXXV.

J. H. Newman, Ancient Athens.

Candidates are expected to have a critical understanding of the development of poetry from Cowper to Tennyson.

### *Final.*

(Every candidate for Final Honours is subject to re-examination on the Intermediate texts.)

### *A.*

Shelley, Alastor, Hymn of Pan, Stanzas written near Naples, Hymn to Intellectual Beauty.

Ruskin, Modern Painters, Vol. I, Part I, Chaps. I to V (Introductory, Greatness in Art, Ideas of Power, Ideas of Imitation, Ideas of Truth), Part II, Chaps. III and V (Truth of Chiaroscuro, Truth of Space), Vol. III, Part IV, Chaps. IV to VII, (of the False Ideal, of the True Ideal), Chap. XII (of the Pathetic Fallacy), Chap. XVIII, The Teachers of Turner.

Carlyle, French Revolution, Book I, Chaps. I and II, Life and Letters of Cromwell, [Introduction, Letters CXXXIX and CXL, containing accounts of the Battle of Dunbar (Part VI); Letter CLXXXVII, The Dismissal of the Rump (Part VII)].

Emerson, The Method of Nature, Literary Ethics (Essays and Orations).

Arnold, Essays in Criticism (First Series), Sonnets: Quiet Work, To a Friend, Written in Emerson's Essays, Thyrsis, Memorial Verses.

In addition the candidate is expected to read the following works and to answer questions of a general nature on their style and contents.

Scott, *Redgauntlet*, *Old Mortality*.

Thackeray, *Vanity Fair*.

Hawthorne, *The House of the Seven Gables*.

Carlyle, *Life of John Sterling*, Part I.

Candidates are expected to have a critical understanding of the development of thought, as expressed in literature, during the 19th century.

#### B.

1. The poetry of Chaucer is the centre of studies in this course.
2. Origin and development of the octosyllabic couplet; origin and development of decasyllabic verse.
3. The *Compleynte unto Pite*, *The Book of the Duchess*, and the *Legend of Dido* (*Legend of Good Women*). Use Skeat's edition of Chaucer's *Minor Poems* and *The Legend of Good Women*.
4. The structure of the stanza, Dante's theory of the stanza, the 4-line stanza, the 7-line stanza, the Spenserian stanza.

Consult Ten Brink, Chaucer, *Studien zur Geschichte seiner Entwicklung*.  
Chaucer's *Sprache* and *Verskunst*.

Sandras, *Etude sur Chaucer*.

Gaston Paris, *La Littérature Française, Au Moyen Age*, Section II, Chap. V (*Le Roman de la Rose*), Section III, Chaps. I and II.

Schipper, *Altenglische Metrik* (*Englische Metrik, Erster Theil*).

Grober, *Romanische Philologie* (*Romanische Verslehre* von E. Stengel).

#### EXTRA-MURAL STUDENTS.

There are tutorial courses for extra-mural students in Junior, Senior and Honours English. The subjects for study are the same as those prescribed for intra-mural students, with the following exceptions (already noted in the list of subjects for each class):—

In studying the development of Poetry and Poetic Forms, extra-mural students of the Senior class might with advantage consult Corson's *Primer of English Verse* and Gummere's *Hand-book of Poetics*; and for the history of the language, O. F. Emerson's *History of the English Language* (Macmillan & Co.), Chaps. III, IV, V, VII, IX, X, XIII, XIV, XV, XVII, XVIII, XIX, XX, XXI, XXII.

Students in Preliminary Honours will read the whole of Emerson's *History of the English Language*.

Extracts from Prof. Cappon's lectures will be sent regularly to extra-mural students in all the classes, for the purpose of indicating the range and standard of work required and the methods of analysis and criticism used. Along with the extracts, directions for study and exercises will be sent to the student who is required to write the latter and return them for correction.

## ELOCUTION.

1. *Elements of Vocal Training.* Correct method of breathing. Training of the natural use of the voice. Faults of the voice, studied and corrected.

2. *Principles of Vocal Training.* Study of the vocal instruments and their natural use. Science of voice production.

## II. PHONOLOGY.

1. *Vowels. Principles of vowel formation.* Distinction between vowels and articulations (Consonants).

2. *Articulation. Study of the elements of speech.* Development of the organs of articulation. Correction of common faults.

3. *Pronunciation. Training of the ear. Vocal Quantity.*

## VOCAL EXPRESSION.

1. *Elementary principles of Vocal Expression...* Principles of inflection. Modulation. Emphasis. Verbal Grouping. Pausing. Expressive Reading.

## IV. GESTURE.

1. *Elementary Gesture.* Nature and kinds of action.

2. *Manifesting Gesture.* Study and development of the action of each agent of the body and expression.

3. *Representative Expression.*

NOTE ON GESTURE.—The training outlined on Gesture is intended to dignify the study of it, by taking it out of the realm of study artificially, and by showing it to be a vital, organic part of the oral interpretation of literature and of public speaking. This training consists of Physical exercises for which special classes will be arranged.

NOTE—INDIVIDUAL DRILL.—Students will be shown and helped personally in the particular work of the course. Two and a half hours each day will be devoted to individual drill.

## V. ADVANCED WORK.

Principles of vocal expression. Assimilation and dramatic instinct. Development of the imagination. Rhythm and melody in speech. Tone-color and harmony. Problems in vocal expression. Study of elementary physical action and the practice of short extracts as the means of studying and expressing thought and feeling. Extemporaneous speaking.

Students passing this course will be allowed 5 marks on either the Junior or Senior English examination. A fee of \$3 will be charged.

## HISTORY.

PROFESSOR—J. L. Morison, M.A.

TUTOR—H. P. May, M.A.

### PASS CLASSES.

#### I. *English History.*

This class will deal with English History from the origins to the end of Edward III reign; but all European movements affecting England during these centuries will also be discussed, e.g., The Scandinavian and Danish Attacks on West Europe; the Rise of Feudalism; the Development of the Catholic Church; the Crusades.

Text-books—J. R. Green's Short History (to 1377); Davis, England under the Normans and Angevins; Tout, Edward I (Twelve English Statesmen series).

#### *Essays.*

The subjects have been chosen to bear on the more important points in the period, and in every case easy access can be had to some first-hand authority. Students are advised to use these authorities in combination with the text-book. *These essays form an integral part of the work for the degree.*

- I. Either ("Britain under the Romans"), The "Agricola" of Tacitus, with "Roman Britain" (S.P.C.K.), or any good introduction to the Agricola (e.g., Church's);  
or "An Anglo-Saxon King"  
Asser's "Life of Alfred" (translated), and Pauli's Life of Alfred; The Anglo-Saxon Chronicle (871-901); or J. R. Green's Conquest of England, or Freeman's Old English History.
- II. "A Charter of Liberties." A study either of "Magna Charta" or of "The Provisions of Oxford."
  - (a) The text of M. C. may be found, in Latin, in Stubbs' Select Charters, in English in Adam and Stephens' Documents. The most complete treatise on it is McKechnie's Magna Charta; Stubbs' Constitutional History, Vol. I, and Davis are also good.
  - (b) The Provisions of Oxford—text as above, or in "Simon de Montfort and His Cause," (English History from contemporary sources). Commentary, in the last named volume from the contemporary point of view, or in Davis, or Stubbs, Vol. I.
- III. An Aspect of Earlier Catholicism in Britain.

Either "St. Columba"; using Adamnan's Life of Columba (it may be had very cheaply), with Reeve's Study of St. Columba, or any sketch of him in a Scottish history like Burton's; or "Thomas Becket"; using "St. Thomas of Canterbury" (English History from Contemporary Writers), and Davis, or Freeman in his "Historical Essays," or Robertson in his "Thomas Becket."



## II. *Modern History.*

The History of Discovery and Colonisation, with special reference to America.

The lectures will fall into three sections:—

### 1. Mediæval and Renaissance Explorations.

The most significant book here is Beazley's "Prince Henry the Navigator" (Heroes of the Nations), with Marco Polo's Travels. The two chapters in the Cambridge Modern History, Vol. I, on the subject, are very important.

### 2. Colonisation.

Professor Egerton's History of Colonisation will be the text-book for the class and must be taken as the guide here.

### 3. France and England in America.

For the United States, Professor Goldwin Smith's "The United States," or the introductory chapters of the Cambridge Modern History, Vol. VII (The United States) will prove useful. For Canada, while any good History will serve, students should endeavor to read such volumes of Parkman's works as "Pioneers of France in the New World," "La Salle," and "The Old Regime."

While the sole necessary text-book will be Egerton's "History of Colonisation," the books mentioned above, and others included for essays, should be consulted, as of great importance.

*Essays*—An integral part of the degree:—

I. Either "The work of the Polos and its bearing on later discoveries"; with the Polo travels as text, and either Beazley's "Dawn of Modern Geography," Vol. III, or the introduction to Yule's edition of Merco Polo as commentary; or "The Discoveries and the Renaissance," an attempt to connect the two movements. Beazley will prove useful, and Vol. I of the Cambridge Modern History. I should like students to illustrate the mutual relations of discovery and the Renaissance, either from More's "Utopia" or Bacon's "New Atlantis."

### II. "The foundation of an American Colony."

Students may illustrate, either from Canada, using a book like Parkman's "Old Regime," or from any of the New England States, using the Canadian Modern History, Vol. VII, or special documents or studies, like Bradford's History of the New England Settlement, Captain John Smith's writings, or the volumes on the American Colonies by Doyle or Fiske.

### III. "The causes of the English Colonial Triumph in the Seven Years' War."

Use here Seeley's Expansion of England (a most important book, recommend to all students of the class), with suggestions from Mahan's "Influence of Sea Power," and the Canadian Modern History, Vol. VII.



# PRELIMINARY AND FINAL HONOUR CLASSES.

In these classes the main subject will be the history of modern England (1485-1815), dealt with in a two-year course, with special texts varying from year to year. Preliminary Honour students will take one or other of these periods, together with the European history mentioned below. Final Honour students will cover all the ground from 1485 to 1815 in the two years' course, with both periods of European history. (See below.)

## Period I. 1485-1649.

The Tudor and Stuart dynasties—with More's *Utopia*, Adam and Stephen's *Documents* (such of them as bear on the period), Raleigh's *Discovery of Guinea*, and Milton's *Areopagitica* as texts. Students are recommended to use for general historical reading Gairdner's "Henry VII," Pollard's "Henry VIII," and "England under the Protector Somerset," Creighton's "Elizabeth," Froude's "English Seamen," and Trevelyan's "England under the Stuarts." The introduction to Prothero's *Constitutional Documents* is of great importance.

## Period II (Professor Morison will lecture on this during session 1908-9).

Later Stuart and Hanoverian rule, 1660-1815—with Adam and Stephens' *Documents* (those on the period), Walpole's *Letters* (the selection published by Newnes), and Burke's speeches on *Economical Reform*, Fox's *East India Bill*, with his Bristol speeches or letters (Burke's works (Bohn) Vol. II, pgg. 1-248) as texts. Macaulay and Lecky cover the ground here; but the following monographs are also inclusive of all important facts:—Airy's *Charles II*; Morley's *Walpole*, Harrison's *Chatham*, and Rosebery's *Pitt*, in "Twelve English Statesmen"; Seeley's *Expansion of England*, and Lyall's *British Dominion in India*.

English History will be lectured on, every Monday and Wednesday, and both Preliminary and Final Honour students will attend the lectures. On Thursdays, Preliminary Honour students will study "Problems in Nineteenth Century History," with Fyffe's *Modern Europe* as text-book. Questions, such as "Russia," "Turkish Rule and the Eastern Question," "The Consolidation of Italy," "The Civil War in the U.S.A.," "The Franco-Prussian War," and "The Far East," will be discussed. On Fridays, Final Honour students will work in detail at some mediæval subject. Choice of the subject for examination is left to the student, but each year Professor Morison will take up some special section of mediæval literature and history, beginning in 1908-9 with "Dante." The books selected will be Dante's *De Monarchia* and *Inferno*. In English, Villari's *History of Florence*, Symond's *Introduction to the study of Dante*, Church's *Translation of the "De Monarchia,"* and Carey's translation of the *Inferno* are recommended. Bryce's *Holy Roman Empire* is a useful introduction to the "De Monarchia." In studying the poem, students should endeavor to learn Italian sufficient for translating purposes, and while no question involving definite knowledge of Italian will be asked in the examination, the Dante class will assume an elementary acquaintance with the language. For

this, students will use "The Temple Classics" edition of the *Inferno* with alternate English and Italian texts. While Preliminary Honour students may, and are recommended to sit the whole examination (three papers) in English History (2) and Modern European History (1), they may, if they choose, defer the latter till the final year. In each Honour year two essays will be set and *must be done, as they count in the degree.*

*For Extra-Mural Students.*

Extra-mural students *must* do all three essays in the Pass classes. They will learn the dates for sending them in, when they register. Students in Honours will apply directly to the Professor for information as to their compulsory essays.

In addition, Pass students will receive at the end of the first term an examination paper, which is optional. This may be regarded as a group of short essay questions and should be tried by way of practice.

Preliminary and Final Honour students will consult the Professor as to the courses of reading advised for the work, especially with regard to Modern European History and the special mediæval subject. In Final Honours their choice is unlimited, but they will probably find it convenient to fill in with the special study for the year.

To prevent misunderstanding, extra-mural students are reminded that where essay work is compulsory for the degree, evasion of such work, being equivalent to failure, will involve inability to sit the examination.

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### MENTAL AND MORAL PHILOSOPHY.

"THE JOHN AND ELLA G. CHARLTON PROFESSOR OF MORAL PHILOSOPHY"—

John Watson, M.A., LL.D.

PROFESSOR OF MENTAL PHILOSOPHY—S. W. Dyde, D.Sc., LL.D.

FELLOW IN MORAL PHILOSOPHY—L. M. McDougall, M.A.

FELLOW IN MENTAL PHILOSOPHY—J. L. Nichol, M.A.

TUTOR IN PEDAGOGY—J. C. McConachie, M.A.

MENTAL PHILOSOPHY—Professor Dyde.

This class meets Monday, Wednesday and Friday at 9 a.m. and is divided into two parts (*a*) The Study of Systematic Philosophy, and (*b*) The study of a special period of Philosophy.

(*a*) Lectures on the method of Philosophy; a brief outline of Metaphysics, Ethics and Philosophy of Religion.

Books recommended to be read:

Mackenzie's Outline of Metaphysics and Manual of Ethics.

Bosanquet's Psychology of the Moral Self.

Palmer's The Field of Ethics.

- (b) The History of Greek Reflection. Study of Plato's Theætetus and Aristotle's Ethics (Peters' or Welldon's translation).

Books recommended to be read:

Plato, Republic; Wallace, Epicureanism.

Attendance and exercises are compulsory.

#### MORAL PHILOSOPHY—Professor Watson.

Text-book: Watson's *Outline of Philosophy with Notes Historical and Critical*. Supplementary Lectures. Tuesday and Thursday. Attendance and exercises are compulsory.

NOTE.—Candidates in Mental and Moral Philosophy, who do not pass the April or supplemental examination, must in the session in which they desire again to try the examination, write the essays prescribed for extra-mural students, hand them in to the Tutor for examination and correction, and pay to the Registrar the Tutorial fee of \$5.

#### SPECIAL VOLUNTARY CLASS, 1908-9—Professor Dyde.

A special course of lectures on Aesthetics one hour a week, Wednesday, 2 p.m., free and open to students in any of the faculties.

#### HONOURS.

##### *Preliminary.*

Course 1. Critical study of Modern Philosophy. Professor Watson.

- (a) Lectures on Kant's predecessors.

Text-book: Rand's Modern Classical Philosophy.

- (b) Critical Study of Leibnitz' Monadology.

Text-book: Leibnitz' Monadology (Latta's translation).

- (c) Interpretation of the Philosophy of Kant.

Text-books: Watson's Selectives from Kant and Expository Notes on the Philosophy of Kant.

Course 2. A brief course of lectures on Aesthetics. Professor Dyde.

Text-book: Aristotle's Poetics.

These two courses must be taken by all candidates for Honours in Philosophy. Students who attend and pass the University examinations in the work prescribed above, are not required to take Section A in the work prescribed for Doctor of Pedagogy, but extra-mural candidates must write the essays prescribed for that section and pay the tutorial fee of \$5.00.

*Intermediate.*

1. The work of Preliminary Honours.

2. One of the following courses:—

- (a) Critical study of Contemporary Philosophy, with special reference to Idealism, Pragmatism and Realism. Professor Watson.

Works of reference: Watson's Outline of Philosophy (Supplementary Notes), and Philosophical Basis of Religion, together with prescribed passages in the works of T. H. Green, William James, F. C. S. Schiller, H. Sturt, B. Russell, and G. E. Moore. Students will also be referred to current discussions of these topics in the philosophical journals.

- (b) Study of part of Hegel's *Wissenschaft der Logik*. Professor Watson.  
Different sections are read in successive years, so that the whole of the two books prescribed for the degree of Doctor of Philosophy are ultimately studied.

- (c) Plato's Republic, or Aristotle's Ethics. Professor Callander.

Students who choose this course, besides passing an examination on the Greek text, will be examined on the contents of the work professed. This course covers part of the requirements for the degree of Doctor of Philosophy.

- (d) Comte's Philosophie Positive, or Politique Positive. Professor Campbell.

Besides an examination on the French text, candidates will be examined on the substance of the work professed. This course covers part of the requirements for the Degree of Doctor of Philosophy.

3. One of the following courses. Professor Dyde.

- (a) Reading of Plato's Sophist in the original, or Study of Plato's Theætetus, Sophist, Philebus, and portions of the Timæus and Laws.

Essays:

15th Nov.:—Plato's Dialectic (Plato's Sophist).

20th Dec.:—The Sophistic Conception of the State. (Plato's Protagoras and Republic II, Aristotle's Politics I).

7th Feb.:—Plato's Proof of the Existence of God (Republic II, III, Laws X-XII).

14th March:—Aristotle's Definition of Tragedy (Aristotle's Poetics, Bosanquet's History of Aesthetic).

- (b) Examination of the English text of Hegel's Philosophy of Right. This work is divided into two years, but may be taken in one.

Essays:

15th Nov.:—Hegel's Theory of Crime and Punishment (Phil. of Right, pp. 90-103; Bosanquet, chap. VIII).

20th Dec.:—Time and Dialectic (Phil. of Right, section 3, 341-360, etc.).



7th Feb.:—The Nature of Evil (Phil. of Right, section 140).

14th March:—Religion and the State (Phil. of Right, section 270).

(c) Study of Kant's Critique of Judgment (portions of which to be read in the original), or Ruskin's Modern Painters (selected chapters).

15th Nov.:—Aristotle's conception of Comedy and Tragedy (Aristotle's Poetics).

20th Dec.:—Aristotle's conception of Poetry (Aristotle's Poetics).

7th Dec.:—Kant's Theory of Taste (Critique of Judgment), or Ruskin's View of the Imagination.

14th March—Beauty and Ugliness (Bosanquet's History of Aesthetic).

NOTE.—As a substitute for the essays required in this and the other departments, a more comprehensive essay, not less than 40 pages of foolscap in length, may be offered.

#### Final.

1. The work of Preliminary Honours.
2. Critical study of Contemporary Philosophy, as in Intermediate Honours.
3. One of the following courses, as in Intermediate Honours:
  - (a) Study of part of Hegel's *Wissenschaft der Logik*.
  - (b) Plato's Republic.
  - (c) Aristotle's Ethics.
  - (d) Comte's Philosophie Positive or Politique Positive.
4. Two of the following courses, as prescribed for Intermediate Honours:
  - (a) Plato's Sophist.
  - (b) Kant's Kritik der Urtheilskraft.
  - (c) Hegel's Philosophy of Right.
5. Seminary for special study of some branch of philosophy. Weekly reports. Professor Watson.

Candidates for Final Honours are expected to read such works as Windelband's History of Philosophy, Höffding's History of Modern Philosophy, Caird's Critical Account of the Philosophy of Kant, Green's Prolegomena to Ethics, Bradley's Logic and Appearance and Reality, Bosanquet's Logic, History of Aesthetic and Philosophical Theory of the State, and Wallner's Logic of Hegel.

Candidates in Philosophy may qualify for the degree of M.A. by taking Final Honours, or Intermediate Honours together with Honours in Latin, Greek, French, German, English, History, or Political Science.

#### For Extra-Mural Students.—Pass Work.

##### MENTAL PHILOSOPHY.

Students are expected to show familiarity with the substance of the books mentioned below. They are recommended to take up the work in the following order:



1. Schwegler, History of Philosophy, XI-XV.  
Plato, Theætetus (Dyde's Translation).  
Plato, Republic, Bks. I, II.  
*Essay* for 15th Oct.:—The relation of Plato to the Sophists.
2. Plato, Republic, Bks. III-VII.  
Schwegler, History of Philosophy, XIV.  
*\*Essay* for 1st Nov.:—Plato's Theory of Education.
3. Aristotle, Nichomachean Ethics (Peters' Translation).  
Schwegler, History of Philosophy, XVI.  
*Essay* for 21st Dec.:—The relation of Aristotle's Ethics to his Psychology.
4. Schwegler, History of Philosophy, XVII-XXI.  
Capes, Stoicism (New York: Pott, Young & Co.).  
Wallace, Epicureanism.  
*Essay* for 1st Feb.:—Stoicism and Epicureanism.
5. Schwegler, History of Philosophy, XXII-XXVI.†  
*Essay* for 15th Feb.:—The Principles of the Cartesian Philosophy.
6. Schwegler, History of Philosophy, XXVII-XXXV.  
Fraser, Selections from Berkeley.  
Fraser, Berkeley (Blackwood's Philosophical Classics).  
*Essay* for 14th March:—The Development of the Philosophy of Berkeley.

#### MORAL PHILOSOPHY—Professor Watson.

Students will be examined on Watson's "Outline of Philosophy with Supplementary Notes Historical and Critical" and "Hedonistic Theories." Exercises will be prescribed. These are compulsory and they will be examined and corrected by the Tutor, under supervision of the Professor.

#### HONOURS.

The Honour courses for extra-mural students are the same as the Honours courses for intra-mural students, except that additional essays are required, for which the Professors must be consulted.

\*Nettleship's article on "Plato's Theory of Education" in *Hellenica* (Rivingtons) is very valuable, but a minute knowledge of it will not be required.

†See also Caird's article "Cartesianism" in the *Encyclopædia Britannica* or in his *Essays, Literary and Philosophical*, Vol. II.

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#### POLITICAL SCIENCE.

PROFESSOR—Adam Shortt, M.A.

LECTURER—Oscar Skelton, M.A.

#### ECONOMICS.

The lectures will include a discussion of the general principles of Political Economy.

Text-book for general reference: Gide's *Principles of Political Economy*.

POLITICS.

The lectures will include a critical examination of the leading theories of the state, and a discussion of the nature of Social and Political Relations.

In both classes essays will be required.

Economics and Politics may be taken during the same session.

HONOURS.

*Preliminary.*

This class will meet for the discussion of Economic, Social and Political Principles, and for the critical reading of portions of the work prescribed for Honours.

A course of lectures will be given on Canadian Economic and Political History.

Candidates will be examined on the following books:

ECONOMICS.

Smith's Wealth of Nations.

Mill's Principles of Political Economy.

Seligman's Principles of Economics.

Ingram's History of Political Economy.

POLITICS.

Maine's Ancient Law.

Documents relating to the Constitutional History of Canada. Shortt and Dotighty.

Dicey's Law and Public Opinion in England.

Lowell's Governments and Parties in Continental Europe.

*Final.*

This class will meet for the further discussion of Economic, Social and Political Principles.

Candidates must show familiarity with the substance of the following books:

ECONOMICS.

Darwin's Municipal Trade.

Scott's Money and Banking.

Seligman's Essays in Taxation.

Ripley's Pools and Trusts.

Commons' Trade Unionism and Labor Problems.

Greene's Corporation Finance.

Johnson's Railway Transportation.

POLITICS.

Sidgwick's Development of European Polity.

Holland's Elements of Jurisprudence.

Arnold's Culture and Anarchy.

Kirkup's History of Socialism.

An essay embodying independent work in some section of the Honour course will be required from every candidate for Honours.

*For Extra-mural Students.*

In each of the Pass classes a series of exercises will be provided, containing notes on the texts and questions on points of detail to be answered as concisely as possible. Scope for more extended discussion will be found in the essays prescribed.

ECONOMICS.

Candidates will be examined on the following books:

Seager's Introduction to Economics.

Cheney's Industrial and Social History of England.

*Essays during session 1908-9:*

The attitude of the state to commerce and industry throughout English history.

The marginal utility theory of value.

A comparison of the Canadian and the American banking systems.

The relation of the public to the railroads as regards (a) subsidies, (b) regulation, (c) ownership.

POLITICS.

Candidates will be examined on the following books:

Aristotle's Politics, Welldon's Translation, Bks. I, III, IV, V.

Locke's Essay on Civil Government.

Pollock, History of the Science of Politics.

*Essays during Session 1908-1909:*

A comparison of the views of Aristotle and Locke as to the relation of the state to the individual.

The social contract theory.

The theory of sovereignty.

The function of the state.

HONOURS.

The texts prescribed will be the same as in the case of intra-mural students. In the Preliminary class essays will be assigned individually. Final Honours candidates will be required to present a thesis embodying independent work in some special field.

Extra-mural students are required to pay a fee of \$5.00 for either the Preliminary or Final Honour Class.

# MATHEMATICS.

PROFESSOR—N. F. Dupuis, M.A., F.R.S.C.

ASSISTANTS—J. Matheson, M.A., L. A. H. Warren, M.A.

TUTOR—L. Malcolm, M.A., B.Sc.

## TIME TABLE FOR MATHEMATICS.

(*Italics denote Science Classes.*)

Hour.	Mon.	Tues.	Wed.	Thur.	Frid.
8		<i>Math. II.</i> <i>Algebra I.</i>	<i>Math. II.</i>		<i>Math. II.</i>
9	<i>Math. I.</i>	<i>Math. I.</i>	<i>Math. I.</i>	<i>Math. I.</i>	<i>Math. I.</i>
10	<i>Math. II.</i> <i>Conics II.</i> 2nd term.	<i>Math. II.</i> Senior.	Theory of Functions	<i>Math. II.</i> Senior.	Conics II.
11	Synthetic Sol. Geom.	Calcul. I.	<i>Math. I.</i> Sph. Trig. Astronomy	<i>Math. I.</i> <i>Algeb. II.</i> Det. & Equat.	<i>Math. I.</i> 1st term.
3	Junior Trig. I.	Trig. II. Quater.	Junior Conics I. 1st term. Mod. Geom. 2nd term. <i>Astron. I.</i> 2nd term.	Mod. Syn. Geometry.	Junior Conics I.

## JUNIOR CLASS.

The theory and practice of *Algebra* to the Binomial theorem inclusive. Dupuis' *Algebra*—the first thirteen chapters, omitting chapter XI.

*Geometry* of the point line and circle in the plane. Parts I and II, and selections from Parts III, Dupuis' *Plane Geometry*.

*Trigonometry*, Elementary Principles.

Besides numerous class-exercises, periodical written exercises will be required.

• SENIOR CLASS.

*Algebra*—Dupuis' Algebra, from the twelfth chapter to the end.

*Geometry*—Part III of Dupuis' Plane Geometry, and the first 131 pages of Dupuis' Solid Geometry.

*Trigonometry*—Preceding De Moivre's theorem.

Besides numerous class-exercises, periodical written exercises will be required.

HONOURS.

Candidates who matriculate with Honours in Mathematics are not required, in their subsequent Honour Course, to take either the Junior or the Senior Class, but they are advised to read the Geometry of the Junior Class.

Candidates who do not matriculate with Honours must take the Junior Class as preparatory to their Honour work, but they need not take the Senior Class inasmuch as the work of this class is covered in the first group of Honour subjects.

*Group I.*

1. *Synthetic Modern Geometry*.—One hour per week for the first term and two hours per week for the second term.

Work as in Dupuis' Plane Geometry, Parts III, IV, V, with exercises from various sources.

2. *Algebra I*.—One hour per week during the session.

*Synopsis of Work*: The progressions; permutations and combinations; binomial theorem; remainder theorem; solution of numerical equations with incommensurable roots; inequalities; undetermined coefficients and various applications; partial fractions, expansion of functions, etc.; continued fractions; logarithms; exponential and logarithmic series; recurring series; difference series; interpolation; summation of series; convergency of series.

3. *Trigonometry I*.—One hour per week during the session.

*Synopsis of Work*: Contracted methods with decimals; radians and degrees; trigonometric functions; interrelation of functions; variation of functions with increase of angle; graphs; solution of right-angled triangles; orthogonal projection; addition formulæ; transforming sums into products, and vice versa; multiple and submultiple angles; applications to triangles, quadrangles and regular polygons; tables of functions, natural and logarithmic; logarithmic formulæ; inverse functions; solution of trigonometric equations; limits and approximations; series for sine and cosine. Numerous exercises.

4. *Conics I*.—two hours per week for the first term and one hour per week for the second term.

*Synopsis of Work*: Co-ordinate systems; rectilinear and polar and their interrelations; co-ordinates of distinctive points; point at infinity; the straight line; standard equation; perpendiculars, bisectors, etc.; relations



of two or more points and lines; collinearity and concurrence; the triangle and the quadrangle; translation of origin. Equations of two dimensions; factorization and the discriminant. The general equation. The circle, with its secant and tangent lines; inverse points and inversion; pole and polar; conjugate points; conjugate figures; Salmon's theorem; radical axis and centre; systems of coaxial circles. The parabola with its tangents and normals; centre of curvature; equation with one variable, etc. General conic and variations of asymptotes; conjugate axes; theorems of Apollonius and other theorems; ellipse and hyperbola; tangents, normals and pedals; eccentric angle; problems and exercises throughout.

Books, etc.:—

1. Dupuis' Plane Geometry, Parts III, IV, V.
2. Dupuis' Algebra, with examples from various sources.
3. Hobson and Jessop's, and also Lachlan and Fletcher's Plane Trigonometry.
4. Lectures, with examples from Smith and Loney.

#### *Group II.*

5. *Synthetic Solid Geometry*.—One hour per week for the session.

Work as in Dupuis' Synthetic Solid Geometry.

6. *Calculus I*.—One hour per week during the session.

*Synopsis of Work:* Limits; functions; differential coefficient, and rules for finding it; tangents to curves; measurement of rates; implicit functions and partial derivatives; motion in curved paths; fundamental integrals; integration by parts; Euler's theorem on homogeneous functions; tangents and normals; pedal equations; asymptotes; successive differentiation; Leibnitz's theorem; differential equation; Taylor's and Maclaurin's series; maxima and minima; radius of curvature; evolute; definite integrals; areas, lengths of curves, volumes and surfaces.

7. *Spherical Trigonometry and Astronomy*.—One hour per week for the session.

*Synopsis of Work:* Three-faced corner and spheric triangle; polar triangle; limits of sides and angles; spherical excess; deduction of formula, cosine formula, sine formula, cotangent formula, geometric meaning of  $\sin A \sin b \sin c$ . Havre-sine formula; DeLambre's equations; Napier's analogies; solution of triangle; Napier's circular parts and applications, etc.

A spherical earth; mean radius; distances along a great circle, parallel of latitude, loxodrome; surveying a great circle, a parallel of latitude; projection of the sphere, stereographic, conical, globular, mercators; meridional parts.

A spheroidal earth; angle of the vertical; true radius vector.

Finding the meridian, latitude, time, etc.; solar, sidereal, and mean time, equation of time.

General descriptive and practical astronomy.

8. *Determinants and Theory of Equations*.—One hour a week for the first term.

*Synopsis of Work*: Determinants; matrices and their transformation; reciprocal determinants; skew and skew-symmetric determinants; circulants; continuants; various applications.

General equation and its graph; Descartes' rule of signs; symmetric functions; binomial equations; transformations; reciprocal equation; the cubic and the biquadratic; real and imaginary roots; solution of numerical equations; Horner's method of approximation; theorems of Fourier, Buden and Sturm; methods of elimination.

9. *Algebra II*.—One hour a week for the second term.

*Synopsis of Work*: Convergency of series; infinite products; limits of infinite series; summation; continued fractions, convergents and intermediate convergents; general continued fractions; indeterminate linear and quadratic equations; theory of numbers; theorems of Fermat, Lagrange, and Wilson; probability, expectation, local probability, etc.

Books, etc.:—

5. Work as in Dupuis' Solid Synthetic Geometry.
6. Reference to Taylor, Gibson, Edwards.
7. Reference to Dupuis' Spheric Trigonometry, Barlow and Bryan's Mathematical Astronomy.
8. Reference to Weld's Determinants, Burnside and Panton's Theory of Equations.
9. Reference to Hall and Knight's Higher Algebra.

#### *Groups III, IV.*

10. *Analytic Solid Geometry*.—One hour per week during the session, every alternate year, 1909-10.

*Synopsis of Work*: Notation, direction, angles, etc.; oblique co-ordinates and ppd.; the line and the plane in space; conicoids to principal axes; generating lines and ruled surfaces; surfaces of revolution; tangent planes; curves of section; confocal conicoids; general equation and its transformations; rotation of axes; invariants; circular sections and umbilici; sections of the conicoids by a plane; axes and area of the section; curvature of surfaces; indicatrix, Meunier's theorem; study of tangent planes, tangent cone, normal planes, radius of curvature, etc., through partial derivatives; study of curves in space, Quetelet's theorem.

11. *Calculus II*.—One hour per week every alternate year, 1909-10.

*Synopsis of Work*: Partial differentials,  $n$ th differentials; Leibnitz's theorem; expansion of functions; various theorems; change of independent variable. Theory of plane curves; tangents, normals, etc.; in-

tersection of curves; polars; pedals; tangentials; inverse curves; polar reciprocals; asymptotes; singular points, nodes, cusps, conjugate points, multiple points, etc.; order of contact; curvature; conic with 3rd order contact; envelopes; caustics; singular forms; max. and min., with two independent variables; LaGrange's criterion.

Integrable forms; hyperbolic functions; areas; lengths of curves, volumes and surfaces; double and triple integration; formulæ of reduction; Pappus' theorems; moment of inertia, etc.; definite integrals; beta and gamma functions.

12. *Differential Equations and Finite Differences*.—One hour per week for the session, every alternate year, 1909-10.

*Synopsis of Work*: Nature and origin of differential equations; equations of first order and degree; exact equations; integrating factors; geometrical interpretations; singular solutions; discriminants and special loci; equations of first order and higher degree; Clairaut's form; applications to geometry and physics; intrinsic equations; trajectories; equations of 2nd order; general linear equation with constant coefficients; operator  $D+a$ ; symbolic methods; homogeneous linear equations; special cases; solution in series; simultaneous and partial differential equations.

Fundamental operation in finite differences; differences of the powers of zero; expansion in factorials; symbols of operations; Herschel's theorem; inverted Maclaurin's theorem; interpolation; LaGrange's formula; methods of approximation; mechanical quadrature; exact summation of series; Euler-Maclaurin sum series; approximate summation; increase of convergency.

13. *Trigonometry II, and Quaternions*.—One hour per week, every alternate year, 1908-9.

*Synopsis of Work*: Series for  $n$ th powers of  $\sin a$  and  $\cos a$ ; De Moivre's theorem; Argand's diagram and complex quantity; properties of  $V$  function; series for  $\cos na$  and  $\sin na$ ; roots of a complex; trigonometric functions expressed in series; series for circular functions; expansion in Bernoullian numbers; factorization of binomial of  $n$  dimensions, and of quadratic trinomial of  $2n$  dimensions; sine and cosine in factor series; certain series; expansion in trigonometric series; summation of trigonometric series; numerous exercises.

Vectors; addition and subtraction of vectors; multiplication and division of vectors; the quaternion; quaternion analysis; 3 or more vectors; applications to line and plane, to circle and sphere, to ellipse and ellipsoid. Investigations of vector equations of tangents, normals, evolutes, tangent plane, tangent cone, etc.; numerous exercises.

14. *Conics II*.—One hour a week for first term and two hours a week for second term in alternate years, 1908-9.

*Synopsis of Work*: General equation and its parameters; transformations; diametral lines; conjugate diameters; rotation of axes; invariants

and their meaning; intersecting chords; contact of conics; osculation; constructions for  $r$ ; evolute; trilinears and contracted methods; harmonic properties of triangle and quadrangle; triangles in perspective; trilinears of 2nd order; discussion of leading equations; harmonicism; inscribed and circumscribed conics; self-conjugate triangle; tangential co-ordinates; circular points at infinity; foci; conics having double contact; conics fulfilling certain conditions; Pascal's and Brianchon's theorems; contact and intersection of conics; anharmonic relations; degraded conics and rectilinear hyperbola; envelopes.

15. *Elementary Theory of Functions*.—One hour per week during the session, every alternate year, 1907-8.

Books, etc.:—

10. Reference to Aldis, Smith, Salmon.
11. Reference to Edwards' Diff. Calculus, Williamson's Integral Calculus.
12. Reference to Johnson, Cohen.
13. Reference to Lock's Higher Trigonometry, Kelland and Tait's quaternions.
14. Reference to Salmon's Conics.
15. Lectures.

Of Groups III and IV, 13, 14, 15 will be taken in session 1908-9.

Group I taken as a part of a Pass Course will count for Senior Mathematics and one of the optional subjects in courses I and II as given on page 53, provided that in the examination of this group the candidate makes at least 33 per cent. on each subject, and an average of 50 per cent. on the whole group.

Candidates for Honours must make a minimum of 40 per cent. upon each subject of Group I, and 60 per cent. upon the whole group, at one examination, after which no further examination on this group will be required.

Candidates for Honours must make at least 50 per cent. upon each of the subjects of Group II, and 60 per cent. upon the group, but honour standing will be determined by the examination on the subjects numbered 10, 11, 12, 13, 14, and 15.

The subjects of Groups II, III, and IV must be taken in not more than two examinations, and at any examination a candidate may offer any subject upon which he has failed at a previous examination. But 10, 11, 12, 13, 14 and 15 must be taken at the final examination.

Candidates are recommended to follow the order of subjects as indicated above, as nearly as may be practicable.

#### *For Extra-Mural Students.*

The work for extra-mural students is the same as that for intra-murals, except in the matter of exercises.

The Mathematical Department has issued a book containing a very large number of exercises, covering the work of the Junior,



Senior, and first Honour group of subjects, and to a considerable extent the work of the second Honour group. The extra-mural student must supply himself with a copy of this book, and exercises will be mainly prescribed from it by giving section and number. The first exercise will be indicated about Oct. 15th, and thereafter every fortnight. Exercises prescribed before the middle of any month must be returned before the end of the month, and those prescribed after the middle must be returned not later than the middle of the next month.

Work on the exercises will be estimated according to the number successfully done.

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### PHYSICS.

PROFESSOR EMERITUS—D. H. Marshall, M.A., F.R.S.E.

PROFESSOR—Arthur L. Clark, Ph.D.

ASSOCIATE PROFESSOR—N. R. Carmichael, M.A.

LECTURER—W. C. Baker, M.A.

DEMONSTRATORS—J. C. Pomeroy, B.A., M. L. Cornell, M.A., G. B. Stillwell, B.A., W. P. Ferguson, H. R. Kingston, W. W. Doxsee.

#### JUNIOR CLASS.

Lectures and demonstrations are given in the following subjects; Dynamics and Properties of Matter, one hour per week; Heat and Light, one hour per week; Electricity, Magnetism and Sound, one hour per week.

Text-books: Porter's Intermediate Mechanics.

Millikan and Gale's First Course in Physics.

Carmichael's Physical Experiments.

Weekly exercises are given throughout the session.

A knowledge of Algebra, Geometry, and the rudiments of Trigonometry on the part of the student is assumed.

Students are required to spend two hours a week in the Laboratory doing experimental work. Hours for this purpose will be arranged as far as possible to suit the students.

#### SENIOR CLASS.

The work of this class is largely a continuation of that done in the Junior class.

Text-books: Watson's Text-Book of Physics.

Carmichael's Physical Experiments.

Weekly exercises are given throughout the session.

Students are required to spend two hours a week in the Laboratory doing experimental work.



Students who are allowed to take the Senior Class without having attended the Junior are strongly recommended to attend the lectures of the Junior Class, especially those upon Heat, Light, Electricity, Magnetism and Sound. In the Junior Class the fundamental experiments in these subjects are shown and discussed, while in the Senior Class more attention is paid to the development of physical theory.

#### HONOURS.

##### *Preliminary.*

Students intending to complete the Honour Course in Physics are required to take the Preliminary Honour Class at the University.

Students should take Group I of Honour Mathematics before entering this class.

The work includes:

1. *Dynamics*, two hours per week.
2. *Heat*, Thermodynamics, one hour per week.
3. *Electricity and Magnetism*, one hour per week.

J. J. Thomson's Elements of the Mathematical Theory of Electricity and Magnetism.

4. *Experimental work*, two hours per week.

Selected experiments illustrating the subjects treated in the lectures.

Besides the prescribed text-books students are expected to read sections from other books and articles from the Journals to which they are referred from time to time. These may be found in the Library of the Department.

##### *Final.*

Students intending to attend the Final Honour Lectures in Physics are advised to acquire a reading knowledge of French and German.

This class must be taken at the University. The work includes:

1. *Experimental work in the Laboratory.*

Honour students are expected to spend a large portion of their time in the Laboratory. In the first year their work will consist of a selected course of advanced experiments in Mechanics, Heat, Light, Sound, Magnetism and Electricity; in the second year, of a small number of more elaborate measurements intended to acquaint them with some of the methods and instruments used in modern research.

2. *An Elementary Course in Theoretical Mechanics.*

Ziwet's Theoretical Mechanics.

3. *An Advanced Course in Theoretical Mechanics.*

4. *Heat.* Kinetic Theory of Gases and Thermodynamics.

5. *Physical Optics.* Mathematical Theory of Selected Topics.

6. *Electricity and Magnetism.* Electric Waves, Conduction of Electricity through Gases, Radioactivity.

Lectures are given upon subjects 4 and 5, and upon 6 in alternate sessions. Subjects 4 and 5 will be taken up in session 1908-9.

#### HONOUR EXPERIMENTAL PHYSICS.

This class must be taken at the University.

The work required under this title in Honour Course C (1) and Specialists' Course VIII (6) consists of:

1. The Laboratory work of the Preliminary and Final Honour Physics classes (omitting portions which involve advanced mathematical theory).
2. Selected parts (not requiring advanced mathematics) of the courses of lectures given in the Honour Classes.
3. Reading of prescribed articles from magazines and books relating to the experiments performed.

#### LIBRARY.

The principal Physical Journals and books relating to the Lectures and Laboratory work are kept in the Library of the Physics Department where they may be freely consulted by the students.

#### *For Extra-Mural Students.*

Extra-mural students are expected to do the weekly exercises prescribed. They should also write to the Tutor stating what facilities, if any, they have for making experiments. Experiments will be prescribed to suit their circumstances as far as possible.

Under special circumstances, a limited amount of apparatus may be sent from the Laboratory upon conditions to be arranged.

#### JUNIOR CLASS.

A syllabus of the work stating the text-books required and the portions to be read with information about exercises, etc., will be sent to the students. The sections will be selected to correspond as far as possible with the work done by intra-mural students.

#### SENIOR CLASS.

The text-book required: Watson's Text-book of Physics.

A syllabus will be sent prescribing the sections to be read and giving information about exercises, etc.

#### PRELIMINARY HONOURS.

Taking this class extra-murally does not qualify a student to proceed to the Final Honour Class.

A syllabus of the work, stating the text-books required and the portions to be read, and the experiments to be performed, will be sent.

## BOTANY.

PROFESSOR EMERITUS—Rev. James Fowler, M.A., LL.D.

PROFESSOR—W. T. MacClement, M.A., D.Sc.

TUTOR—A. B. Klugh.

### *Pass Class.*

This course is designed to furnish an intelligent conception of the structure, life processes, and life relations of plants, for students who may pursue the subject no further. It also is a foundation for advanced work for those who desire to make Botany a special study. The work consists of lectures, discussions and laboratory experiments with plants and plant products. The principles of classification are studied from specimens of the chief orders of Canadian plants.

Lectures and Laboratory—10 a.m., Tuesday, Wednesday and Thursday.

Text-books:—Leavitt, Outlines of Botany.

Gray, Field, Forest and Garden Botany.

(These may be had bound together, Amer. Book Co.)

Coulter, Plant Relations (Appleton).

### HONOUR BOTANY.

#### *Preliminary Honours.*

The work of this course is largely a laboratory study of the structure and the physiological processes of plants. Material, either fresh or preserved, illustrating the evolution of plant structures, is studied with the aid of dissecting and compound microscopes. Permanent records, in the form of ink drawings, are required. An experimental course in plant physiology is accompanied by lectures, discussions, and the study of prescribed texts.

Laboratory:—10-12, Monday, Wednesday and Friday.

Lectures:—11-12, Tuesday and Thursday.

Text-books:—Coulter, Plant Structures (Appleton).

Campbell, Evolution of Plants (Macmillan).

Atkinson, College Botany, Parts I and II (Holt & Co.).

#### *Final Honours.*

The subjects studied in this course are Plant Histology, Ecology, and Taxonomy. A practicable course in the preparation of acceptable mounts of the various vegetable structures accompanies a study of structural modification due to environment. Field studies during the autumn months are obligatory. The resources of the herbarium are adequate to a study of the important orders and genera.

Laboratory:—10-12, Monday, Wednesday and Friday.

Lectures:—11-12, Tuesday and Thursday.

Text-books:—Chamberlain, Methods in Plant Histology.  
Atkinson, College Botany.  
Gray, Manual of Botany.  
Underwood, Ferns and Their Allies.  
Grout, Mosses with a Handlens.

#### MEDICAL BOTANY.

1. Structural Botany of Algae, Fungi, Liverworts, Mosses, Ferns, Horsetails, Clubmosses, and Seed Plants.  
Lectures, recitation and drawings from the microscope.
2. Physiology of Plants.  
Experimental demonstration of the facts of Respiration, Transpiration, Osmosis, Transfer of Water, and Nutrition.
3. Taxonomy—Basis of Classification, Chief Families, Use of Analytical Key to Families, study of representative forms.
4. Examination of local species belonging to plant families important in medicine and toxicology.

Text-books:—Coulter, Plant Structures and Plant Relations.  
Gray, Manual of Botany.

#### *For Extra-Mural Students.*

The work is, as far as possible, the same as that done by students attending the regular classes. Material for study is either furnished by the University, or directions are given for its collection by the student. The results of the study of this material are to be promptly forwarded to the University, where the instructor in charge will examine the reports and recommend further work. A good handlens and simple dissecting instruments are required in the Pass course; a compound microscope and simple physical apparatus for the Preliminary Honours. The Final Honour course is not given extra-murally.

The University will furnish a compound microscope, on condition that a deposit of \$36 be made by the student. On the return of the instrument in good condition, this deposit will be refunded, less \$5 for its use for each session.

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#### ANIMAL BIOLOGY.

PROFESSOR—A. P. Knight, M.A., M.D.

LECTURER—F. Etherington, M.D., L.R.C.P. and S., Edin.

DEMONSTRATOR—I. G. Bogart, M.D.

Students in Medicine are required to take the class in elementary morphology.

Students in Arts have the option of taking either the class in elementary morphology, or the class in elementary physiology and hygiene.

Students in Arts who intend subsequently to study medicine are advised to take the pass and honour classes and thus complete their physiology and histology during their undergraduate course. Besides the special course for B.A., M.D., the honour course in Science, C, number 2, (with Animal Biology) page 69, or the specialists' course in science, page 72, is suitable for this purpose. The course in sanitary science for the degree of B.Sc. in practical science, is also suitable for medical students.

Dr. C. K. Clarke, Medical Superintendent of the Toronto Hospital for the insane, will give a short course of lectures upon heredity and insanity in relation to crime and the treatment of the criminal.

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### ELEMENTARY MORPHOLOGY.

Lectures or demonstrations will be given tri-weekly at 9 a.m. during the session. Part I will last from October until Christmas and will treat of general Biology and the everyday lives of animals. Part II will deal with the outlines of classification and will cover the rest of the session. It will be suitable for students taking the honour course in Geology or the course in Mining Engineering. Arts students who select the morphology option must take parts I and II. Science students need take part II only.

The lectures treat of protoplasm, cells, cell division, reproduction, early stages of development, tissues, organs, differences between animals and plants, general view of the invertebrata and of the vertebrata, organic evolution, everyday lives of animals.

The laboratory work consists of such dissections and demonstrations as will elucidate the subject of the lectures. The lectures are illustrated by diagrams, charts, and lantern transparencies. Text-books: Comparative Zoology by J. S. Kingsley, (Henry Holt & Co.); Animal Life by Jordan and Kellogg; (American Book Co.)

The senior leaving examination in biology of the Education Department is accepted in lieu of attendance and examination in this class.



## ELEMENTARY PHYSIOLOGY AND HYGIENE.

Lectures or demonstrations will be given on Tuesdays and Thursdays at 10 a.m. upon physiology, and on Fridays at 11 a.m. upon hygiene.

The lectures will treat of the functions of bones, joints and muscles; the relation of muscle and nerve; the work of blood and lymph; the circulation of these tissues; diet, digestion, absorption, metabolism, respiration and animal heat; excretion; nervous system and special senses; an outline of personal, household, municipal and national hygiene.

### *Extra-Mural Students.*

Extra-mural students who select the elementary morphology option are required to do the practical work outlined for Honour Matriculation in Zoology. They will be examined on Professor Ramsay Wright's *High School Zoology*.

Extra-mural students who select physiology and hygiene as the subjects of their Pass class may procure most of the specimens required in the study of the physiology, on depositing \$10.00 with the Registrar. On receipt of such deposit, a set of specimens will be loaned to the student for half a session.\* Students will be examined on Moore's *Elementary Physiology* (Longmans' Green & Co.), and upon Pyle's *Personal Hygiene* (W. B. Saunders & Co.)

### HONOURS.

Candidates who have not matriculated with honours in biology and who intend to take an honour course in the subject must take the Pass class in elementary morphology.

The course in comparative and practical anatomy extends over two years, and the work of each year is read in class every alternate session.

Preliminary honours are awarded on the honour papers of the first session in honours. The class in elementary physiology is part of the preliminary honours' course.

Final honours are awarded on the honour papers of both sessions taken together.

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\*The Histological specimens required for microscope study can be bought from Thomas Little, Laboratory Assistant, for \$2.00.

The lectures and demonstrations in "physiology" and "histology" are attended simultaneously by students in medicine and arts.

Honour students are required to attend the course of lectures on the "Development and Structure of the Nervous System" which is given to medical students in the department of human anatomy by Professor Etherington. The honour work in physiology for the second year lasts during the whole session.

The study of animal forms in the museum will be under the direction of Professor McClement. He will meet the class once a week in the museum.

Graduation in honours in the department of biology lessens, by one year, the length of the course required by the Medical Council of Ontario.

The practical examinations in honours in this department are held at the University only.

#### HONOURS.

##### *Extra-Mural Students.*

Extra-mural students can procure the necessary marine forms for dissection by ordering them from "The Supply Department, Marine Biological Station, Woodshole, Mass, U.S." The histological specimens required for Microscope study, can be purchased from Thomas Little, Laboratory Assistant, Queen's University, at the rate of 25c. per slide, or \$4.00 for a complete set of fifty.

SESSION 1908-1909, 12 M. to 1 P.M.

##### *Biology of Invertebrata.*

Examination of typical specimens of the different classes.

Histology and Embryology.

Physiology.

Daily Laboratory Work.

Dissection of the forms in Pratt's Invertebrate Zoology.

SESSION 1909-1910, 12 M. to 1 P.M.

##### *Biology of Vertebrata.*

Study of types of the different divisions of Vertebrata.

Histology and Embryology.

Physiology.

Daily Laboratory Work.

Dissections of the forms in Pratt's Vertebrate Zoology.

Books for study and laboratory work:

Text-book of Physiology, 2 Vols., edited by E. A. Schafer, LL.D

Tigerstedt's Text-book of Physiology.  
Halliburton's Hand-book of Physiology, last edition.  
Claus and Sedgwick's or J. Arthur Thompson's Zoology.  
Weidersheim's Elements of Comparative Anatomy.  
Foster & Langley's Histology or Dr. Stirling's.  
Balfour & Foster's Elements of Embryology.  
Darwin's Origin of Species.

## CHEMISTRY.

PROFESSOR—William L. Goodwin, D.Sc., Edin.  
ASSISTANT PROFESSOR—John Waddell, B.A., D.Sc., Ph.D.  
LECTURERS—C. W. Dickson, M.A., Ph.D.; W. O. Walker, M.A.;  
A. R. B. Williamson, M.A., M.D.; Isaac Wood, M.A.,  
M.D.; J. F. Sparks, B.A., M.D.  
FELLOW—W. P. Firth, M.A., D.Sc.  
DEMONSTRATORS—D. R. Cameron, M.A.; F. L. Sine, M.A.; M. R.  
Bow, C. W. Drury.

### JUNIOR CLASS.

*Lectures:* Monday and Tuesday at 11 a.m.

*Laboratory:* Wednesday at 11 a.m.

Chemical Species—Crystals and Crystallization—Chemical Change—Laws of Combination—Combining Weights—Relations of Heat to Chemical Changes—Notation—Equations—Nomenclature—Volume Relations of Gases in Chemical Change—Volume Formulæ—Molecular Weights—The Atomic Theory—Atomic Weights—Descriptive Chemistry of the Commoner Elements and their Compounds—The Periodic Law—Properties of Solutions—Electrolysis—Spectrum Analysis—Chemical Calculations.

*Books:* Alex. Smith's General Inorganic Chemistry (The Century Co., New York).

Waddell's Arithmetic of Chemistry (The Macmillan Company, New York), Chapters I-V.

### SENIOR CLASS.

1. Organic Chemistry—Thursday at 11 a.m.
2. Chemical Laws and Theories—Friday at 11 a.m.
3. Special Chemistry of the Metals, their occurrence in nature, reduction and uses—Thursday at 8 a.m.

(2) with either (1) or (3) is required.

*Books:* Walker's Physical Chemistry (Macmillan & Co., London), omitting Chaps. X, XI, XIII, XIV, XIX, XXV, XXVII, XXVIII and the mathematical parts of XXII, XXIII and XXIV.

Cohen's Theoretical Organic Chemistry (Macmillan & Co.).

Richter's Inorganic Chemistry, Chapters on Metals (P. Blakiston's Son & Co.).

Alex. Smith's General Inorganic Chemistry, Chapters on Metals (The Century Co.).

Waddell's Arithmetic of Chemistry, Chap. VI to the end.

Students intending to proceed to Honours in Chemistry may begin Qualitative Analysis in the year in which they take senior Chemistry.

HONOURS.

*Preliminary.*

(May be taken as a Pass Class.)

1. Organic Chemistry.

The detailed study of selected groups of carbon compounds and their preparation in the Laboratory. (1. Organic Chemistry of the Senior Class must be taken along with this, if not already taken. A knowledge of Nos. I, II and III of the Senior Class is required for Honours).

Wednesday, 2 to 5 p.m.

2. Industrial Chemistry (or \*Physiological and Pathological Chemistry).  
Monday and Thursday at 3 p.m.

3. Crystallography (Elementary). See Mineralogy (First Term).

4. Qualitative Analysis and Blowpiping.

5. Qualitative Analysis of Minerals, &c., or \*Urinalysis, &c.

Students are required to complete the first 25 introductory exercises in Noyes's Qualitative Analysis, and to hand in their note-books for inspection. This must be done before beginning the analysis of unknown substances.

*Books:* Cohen's Practical Organic Chemistry for Advanced Students (Macmillan & Co., London).

Simon's Physiological Chemistry (Lea Brothers & Co., Philadelphia).

Williams' Crystallography (Henry Holt & Co.).

Arthur A. Noyes's Qualitative Analysis (The Macmillan Co., New York).

Thorp's Industrial Chemistry (The Macmillan Co., New York).

Treadwell's Analytical Chemistry, Vol. I, Qualitative Analysis, Translated by Hall; (Wiley & Sons).

Simon's Manual of Chemistry (Lea Brothers & Co., Philadelphia).

*Syllabus of Industrial Chemistry.*

Lixiviation, Levigation, Evaporation, Distillation, Sublimation, Filtration, Crystallization, Calcination, Refrigeration, Density, Water, Sulphur, Sulphuric Acid, Salt, Hydrochloric Acid and Sodium Sulphate, Soda, Chlorine, Fertilizers, Lime, Cement, and Plaster of Paris, Phosphorus, Arsenic Compounds, Sulphates, Pigments, Petroleum.

Nitric Acid, Ammonia, Potash, Glass, Ceramics, Bromine, Iodine, Water Glass, Peroxides, Oxygen, Cyanides, Carbon Bi-sulphide, Carbon Tetrachloride, Manganates and Permanganates, Destructive Distillation of

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\*This option is for students who intend to take a course in Medicine.

Wood, Illuminating Gas, Coal Tar, Vegetable and Animal Oils, Soap, Candles, Glycerine, Starch, Dextrine and Glucose, Cane Sugar, Fermentation Industries, Explosives, Textile Industries (Bleaching and Dyeing), Paper.

*Final.*

6. Physical Chemistry: Kinetic Theory of Gases; Properties of Solutions: The Periodic Law; Thermochemistry; Electrochemistry; Photochemistry.

Tuesday at 9 a.m., and Friday from 8 to 10 a.m. (Laboratory).

7. History of Chemistry.

Tuesday at 3 p.m. (Second Term).

8. Quantitative Analysis.

9. Assaying.

Subjects (1), (2) and (3) must be taken at one examination, but may be taken without (4) and (5).

Subjects (6) and (7) must be taken at one examination, but may be taken without (8) and (9).

*Books:* Walker's Physical Chemistry (Macmillan & Co.).

Ostwald's General Chemistry (Macmillan & Co.).

Meyer's Modern Theories of Chemistry.

Ladenburg's History of Chemistry (W. F. Clay, Edinburgh).

Rodwell's Birth of Chemistry (Macmillan & Co.).

Bolton's Quantitative Analysis (J. Wiley & Sons).

Furman's Manual of Assaying (J. Wiley & Sons).

Waddell's Arithmetic of Chemistry (The Macmillan Co.).

*Syllabus of Quantitative Analysis and Assaying.*

1. Barium Chloride—Ba, Cl, H<sub>2</sub>O.
2. Magnesium Sulphate—Mg O.
3. An Ammonium Salt—N H<sub>3</sub>.
4. Phosphate—P<sub>2</sub> O<sub>5</sub>.
5. Dolomite—CaO, Mg O, SiO<sub>2</sub>, Fe<sub>2</sub> O<sub>3</sub>, C O<sub>2</sub>.
6. Coal—water, volatile matter, fixed carbon, ash.
7. Bleaching Powder—available chlorine.
8. Iron Ore—qualitative analysis; determination of Fe, Si O<sub>2</sub>, S.
9. Pig iron—Si, P, Mn, C.
10. Zinc Ore—Zn.
11. Lead Ore—Pb.
12. Copper Ore—Cu by electrolytic and cyanide methods.
13. Nickel Ore—Ni by electrolytic methods.
14. Silver Coin—Ag by Cupellation.
15. Pig Lead—Ag and Au.
16. Gold and Silver Ores—Au and Ag by pot assay.
17. Silver Ore—Ag by blowpipe assay.



18. Barite— $\text{BaO}$ ,  $\text{SrO}$ ,  $\text{SO}_3$ .
19. Bronze— $\text{Cu}$ ,  $\text{Sn}$ ,  $\text{Zn}$ .
20. Alkalimetry—
21. Acidmetry—
22. Chrome iron ore— $\text{Cr}_2\text{O}_3$ .
23. Feldspar— $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{CaO}$ ,  $\text{MgO}$ ,  $\text{K}_2\text{O}$ ,  $\text{Na}_2\text{O}$ .
24. Titaniferous Iron Ore— $\text{TiO}_2$ ,  $\text{Fe}$ ,  $\text{SiO}_2$ ,  $\text{S}$ ,  $\text{P}$ ,  $\text{MnO}$ ,  $\text{CaO}$ ,  $\text{MgO}$ .
25. Arsenopyrite— $\text{As}$ .

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*For Extra-Mural Students.*

Extra-mural students are required to do promptly the work set by the Tutor and will not be admitted to examination until this work is completed.

JUNIOR.

*Books to be read:*

Alex. Smith's General Inorganic Chemistry (The Century Co., New York).  
Waddell's Arithmetic of Chemistry (The Macmillan Co., New York),  
Chapters I-IV.

SENIOR.

*Books to be read:*

Walker's Physical Chemistry (Macmillan & Co., London), see p .  
Waddell's Arithmetic of Chemistry, Chap. VI to end.  
Cohen's Theoretical Organic Chemistry (Macmillan & Co.).  
Richter's Inorganic Chemistry (P. Blakiston's Son & Co., Philadelphia).  
(Chapters on Metals.)  
The work in *Cohen* and *Richter* is to be selected under the guidance of the Tutor.

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*For Students in Medicine.*

*First Year.*

Wednesday at 11 a.m., and Thursday, 11 a.m. to 12.30 p.m., and at 3 p.m.

*Second Year.*

ORGANIC CHEMISTRY.

Friday, at 9 a.m.

ANALYTICAL CHEMISTRY, ETC.

N.B.—Before taking this class students must pass the examination in Junior Chemistry (First Year).

1. Systematic Testing—First Term—Saturday, 10 a.m. to 1 p.m.
2. Chemical Toxicology—Second Term—Saturday, 10 a.m. to 1 p.m.
3. Urinalysis—Monday, 8 a.m.
4. Physiological Chemistry—Thursday, 8 a.m., and in *Second Term*, also Friday, 8 a.m.

*Books:* Waddell's Arithmetic of Chemistry.

Simon's Manual of Chemistry (Lea Brothers & Co., Philadelphia).

*Junior, Senior and Preliminary Honours* of the Arts course cover all the Chemistry required of students of Medicine.

## MINERALOGY.

(Ontario Hall, third floor.)

PROFESSOR—William Nicol, M.A.

FELLOW—Wyatt Malcolm, M.A.

*For Intra-Mural Students.*

Students in Mineralogy are expected to take part in the field excursions held during the Fall Term. Excursions are taken every Saturday, weather permitting, and on Saturdays when excursions cannot be taken, demonstrations in the museum will be given. The cost of the field work will not exceed five dollars.

Pass and Preliminary Honours may be taken in one year by students in Honours.

Students intending to take Mineralogy are advised to take Junior Chemistry and Junior Physics before commencing it.

Each student in this department is supplied with a locked cabinet containing about 100 mineral specimens for which a cash deposit of ten dollars must be made and a receipt given, and an agreement made to return the minerals at the close of the session.

One of the rooms in connection with the Department of Mineralogy has been furnished as a study and consulting room for students in this department. The Professor or his assistant will be available for consultation at hours when classes are not being held. Systematic and illustrative collections of minerals, crystals and models are on exhibition.

The Department is furnished with a first-class lantern and projection apparatus.

Books from the Library of the Department of Mineralogy and from the Professor's private library may be obtained by application to the Professor.

### MINERALOGY I.

*Pass.*

1. Elementary Mineralogy.
2. Description and determination of the following minerals:

Diamond, graphite, native arsenic, native silver, native gold, native copper, stibnite, molybdenite, cinnabar, galenite, chalcocite, malachite, azurite, sphalerite, niccolite, smaltite, chloanthite, pyrrhotite, bornite, chalcopyrite, pyrite, marcasite, arsenopyrite, halite, fluorite, quartz and prisms, corundum, hæmatite, magnetite, chromite, pyrolusite, psilomelane, limonite, calcite, dolomite, siderite, orthoclase, plagioclase, pyroxene and

vars, olivine, amphibole and vars, garnet, tourmaline, stilbite, analcite, natrolite, muscovite, biotite, serpentine, talc, sphene, zircon, staurolite, apatite, barite, celestite, gypsum, coal and vars.

*Text-book*: \*Miller's Minerals and How They Occur.

The class meets in the Mineralogy lecture-room, Ontario Hall, at 11 a.m., on Mondays.

### 3. Elementary Crystallography.

A course of fifteen lectures delivered at the opening of the session.

*Text-book*: \*Williams' Crystallography (Henry Holt & Co.).

### 4. Blowpipe Analysis—(a) A course of practical demonstrations to illustrate and explain the reactions in studying the chemical properties of minerals. (b) A practical class in which the experiments seen in the lectures are performed by the students.

*Text-book*: \*Brush & Penfield's Determinative Mineralogy and Blowpipe Analysis, 1905.

#### *Books for Reference*:

Cornwall's Translation of Plattner's Manual of Qualitative and Quantitative Analysis with the Blowpipe, 7th Ed. (Van Nostrand Co.).

Cornwall's Manual of Blowpipe Analysis (Van Nostrand Co.).

Landauer's Blowpipe Analysis.

Endlich's Manual of Qualitative Blowpipe Analysis.

Moses & Parsons' Mineralogy, Crystallography and Blowpipe Analysis, 2nd Ed.

*Students must supply their own blowpipe apparatus.*

The class meets in the blowpipe lecture-room, Ontario Hall, on Friday afternoons, from 2 to 4 o'clock.

#### HONOURS.

##### *Preliminary.*

(A knowledge of French and German is desirable.)

1. Systematic Mineralogy, illustrated by specimens, charts, lantern-slides, etc., Tuesday and Wednesday, 11 a.m., and Practical Class at hours convenient for members.

*Text-book*: Dana's Text-book of Mineralogy, 1907 (Wiley & Sons).

#### *Books for Reference*:

Moses' Characters of crystals, 1899.

Miers' Mineralogy (Macmillan & Co.).

Van Horn's General and Special Mineralogy.

Naumann-Zirkel's *Mineralogie*.

Tschermak's *Mineralogie*.

} In Library.

### 2. Practical Crystallography.

Practical study of crystal forms by means of crystals, and wire and wooden models. Two demonstrations per week are given at hours to suit the members of the class.

3. Qualitative analysis of minerals by blowpipe and wet re-agents:—The course in Qualitative Analysis in connection with Preliminary Honour Chemistry and, in addition, the analysis of selected mineral samples to be secured by the students individually from the Professor. Written reports of these must be handed in.

Lectures on Qualitative Analysis.

*Text-book*: Fresenius' Qualitative Analysis.

*Books for Reference*:

Ostwald's Foundations of Analytical Chemistry (Macmillan & Co.).

Menschutkin's Analytical Chemistry (Macmillan & Co.).

4. Essays on prescribed subjects.

#### *Final.*

1. Descriptive Mineralogy.

Description and classification of the commonly occurring minerals, special attention being given to Canadian ores and rock-forming minerals. Study hours are arranged to suit members of class. Attendance compulsory.

*Text-book*: Dana's System of Mineralogy, 6th Ed. (Wiley & Sons).

*Books for Reference*:

Chapman's Minerals and Geology of Ontario and Quebec, 3rd Ed. (Copp Clark Co.) (Library).

Commissioners' Report on Mineral Resources of Ontario, 1890. (Library).

Reports of Geological Survey. New series, 1885-1907. (Library).

Reports of Bureau of Mines. (Library.)

Foote's Catalogue of Minerals. (Library.)

2. Determinative Mineralogy.

Practical instruction in the determination of minerals by means of the blowpipe and by field tests. Tuesday, 1-3 p.m.

Examination of specimens from cabinets. Wednesday and Thursday, 1 p.m. Attendance compulsory.

*Text-books*: Brush & Penfield's Manual of Determinative Mineralogy and Blowpipe Analysis (1905).

Crosby's Tables for the Determination of Common Minerals.

Eakle's Mineral Tables.

3. Quantitative Analysis of Minerals (selected samples).

*Text-book*: Fresenius' Quantitative Analysis.

Lectures on Quantitative Analysis.

4. Economic Geology. (See under *Geology*.)

5. Petrography. (See under *Geology*.)

6. The use of heavy solutions in separating minerals for rock analysis.

7. Use of Contact and Reflecting Goniometer.

8. Drawing Crystals from Goniometric Measurements.

9. Courses of lectures on Economic Mineralogy and History of Mineralogy.

These lectures will be illustrated by lantern-slides, and will be delivered at hours convenient for the members of the class.

10. Essays to be handed in as follows:

Oct. 30, 1908—Mineralogy among the Greeks and Romans.

Nov. 30, 1908—Three Modern Mineralogists.

Dec. 19, 1908—The Diamond.

Jan. 22, 1909—Graphite and its uses.

Feb. 26, 1909—Quartz as a *mineral* and as a *precious stone*.

Mar. 26, 1909—The composition of the silicates.

*Books for Reference:*

The Mineral Industry. (Library, Geol. department).

Reports of Bureau of Mines, 1891-1906. (Library).

Transactions of Canadian Mining Institute.

American Journal of Science. (Library).

Wilmott's *Mineral Wealth of Canada*. (Library).

*Books for Reading:*

Hugh Miller's Works.

Lyell's Principles of Geology.

The Professor reserves the right to retain essays of merit for use in the library of the department.

*For Extra-Mural Students.*

Examinations are held only at the University.

In addition to essays and correspondence, extra-mural students are required to determine and describe the minerals in collections furnished by the lecturer.

For extra-mural students a collection of wooden crystal models may be obtained for two weeks by depositing five dollars with the Registrar, to be refunded when the models are returned.

*Students Pay Express Charges.*

A collection of rocks, minerals and fossils for illustrating Miller's "Minerals and How They Occur" will be sent by express to each extra-mural student as soon as the deposit of ten dollars has been made with the Registrar. This collection must be returned at the close of the session, when the deposit will be returned, less breakage and loss, if any. Express charges must be paid by students.

Text-books indicated by a star in the foregoing lists and a set of blow-pipe apparatus *must* be secured by the students.

Uglow & Co., Booksellers, Princess St., Kingston, will supply necessary books, and McKelvey & Birch, Brock St., Kingston, will supply apparatus.



## GEOLOGY.

PROFESSOR—

LECTURERS—M. B. Baker, B.A., B.Sc., and O. E. LeRoy, B.Sc.

Students taking work in this department have access to the Geological and Mineralogical museum of Queen's University and the School of Mining, and to the Geological library and reading room.

The petrographical laboratory is supplied with electric power, diamond saws and other apparatus required in the preparation of thin sections of rocks and minerals for examination under the microscope.

The microscope room is provided with several instruments of the latest and most approved designs.

The chemical laboratory in connection with the Geological Department is supplied with the necessary equipment for the chemical investigation of rocks.

### *Pass.*

(Students taking Geology, who have not or are not taking Pass Mineralogy, are requested to attend the brief course of lectures on minerals delivered specially for Geology students at the beginning of the fall term.)

The following themes will be treated of in the lectures: The planetary relations of the earth; the atmosphere; water; solid crust; probable nature of the earth's interior; rocks; their general megascopic and microscopic characters and classification; volcanic action; earthquakes; upheaval; subsidence; geological effects produced by heat, air, water and life; bosses; dykes; veins; stratification; dip; strike; anticline and syncline; faults; foliation; nature and uses of fossils; stratigraphical geology; outline of geological history; economic geology, etc.

The lectures are illustrated by means of maps, diagrams and lantern views.

The laboratory work will consist of the examination of typical specimens of the different groups of fossil plants and animals, and of hand specimens of the more common rocks.

During the months of October and November excursions will be made to places of geological interest in the vicinity of Kingston. All students are expected to join these excursions. The cost will not exceed five dollars.

Essays required on prescribed subjects.

Students are required to provide themselves with some elementary book on the subject. W. B. Scott's "Introduction to

Geology," 2nd edition (the MacMillan Co., price \$2.60) is recommended.

*Books for Reference:*

Dana's Manual of Geology.

Le Conte's Elements of Geology (5th Ed. by H. E. Fairchild).

Chapman's Minerals and Geology of Central Canada.

Kemp's Hand-book of Rocks.

Extra-mural students are advised to read Le Conte's Elements of Geology (5th edition) or, Geikie's class-book of Geology (4th edition) and Norton's Elements of Geology (Ginn & Co.) They will also be required to write essays on prescribed subjects.

Students who are not taking Mineralogy are advised to pay particular attention to Chapter I of Scott's Geology, and to provide themselves with a collection of the principal rock-forming minerals.

HONOURS.

*Preliminary.*

(Students taking Preliminary Honour Geology are required to take or to have taken Crystallography, and Mineralogy I.)

*Lectures on:*

Physical Geography, Petrography and Palæontology, Economic Geology.

The laboratory work will consist of the preparation of thin sections of minerals and rocks and their microscopic determination.

The museum work will consist of the megascopic determination of rocks and the naming and classification of Canadian fossils.

Field work comprises observations upon weathering of rocks, shore phenomena; glacial phenomena; igneous; sedimentary and metamorphic rocks; faulting, folds; joints; cleavage. Practice in geological mapping and construction of sections; measuring the thickness of strata and determining the relative ages of geological structures. Essays are required on prescribed subjects. Candidates will also be examined on the following:

Davis', Page's or Geikie's Physical Geography.

Chapman's Minerals and Geology of Central Canada, Part IV.

Geology, Vol. I, Chamberlain and Salisbury.

Luquer's Minerals in Rock Sections.

Kemp's Hand-book of Rocks.

*Books for Reference:*

Wood's Elementary Palæontology.

Harker's Petrology for Students.

Dana's Text-book of Mineralogy.

Cole's Aids in Practical Geology.

Nature of Ore Deposits, Beck (Weed's Translation).

Ore Deposits, Kemp.

Reports of the Geological Survey of Canada and the United States.

Students are advised to devote as much time as possible to field work during the preceding long vacation, and to collect material for study in the laboratory during the winter. Opportunities are usually afforded advanced students for engaging in field work during the summer vacation.

### *Final.*

Lectures on:

Economic Geology.

Petrography.

Palæontology.

Geology of Canada.

Geology in its relations to Mining and Agriculture.

Construction of Geological Maps and Sections.

Laboratory, Museum and Field work.

Candidates will also be examined on the following:

Chamberlain and Salisbury's Geology, Vols. I, II, and III.

Geikie's Text-book of Geology (4th Edition).

Geikie's Field Geology.

Chapman's Minerals and Geology of Central Canada, Parts IV and V.

Dawson's Hand-book of Canadian Geology.

Geikie's Founders of Geology.

Zittel's History of Geology.

Branner & Newson's Syllabus of Economic Geology.

Kemp's Ore Deposits of the United States and Canada.

### *Books for Reference:*

Rosenbusch's Elements der Gesteinslehre.

Rosenbusch's Microscopical Physiography of Rock-forming Minerals.

Zirkel's *Petrographie*, Vols. I, II and III.

Harker's Petrology for Students.

Nicholson's Palæontology. (Eastman.)

Zittel's Text of Palæontology. (Eastman.)

Williams' Geological Biology.

Dawson's Ice Age in Canada.

Wright's Ice Age in North America.

Phillips' Ore Deposits.

Beck's Lehre von den Erzlagertstätten.

Students are advised not to undertake the work in Final Honour Geology until they have acquired a sufficient knowledge of Chemistry and Mineralogy. They should be prepared to devote a large part of their time to the subject throughout the session. Each member of the class will be encouraged to undertake research work, for which the surrounding district offers exceptional opportunities.

*Extra-Mural.*

A corresponding tutor is engaged to communicate with extra-mural students taking Pass Geology. (See also p. 60.)

The work in Honour Geology being largely of a practical nature, must be taken intra-murally.

## ART. XI—POST-GRADUATE DEGREES.

### DOCTOR OF LAWS (LL.D.)

This degree is honorary, and is awarded for literary, scientific or professional distinction.

### DEGREE OF BACHELOR OF PEDAGOGY (B. PAED.).

Candidates must comply with the following conditions:

(1) They must possess the degree of B.A. or M.A. from a recognized University and a permanent first-class or high school assistant's certificate granted by the Education Department of Ontario, or a certificate of equal value.

(2) They must submit certificates of successful experience in teaching.

(3) They must register as intra-mural or extra-mural students not later than Oct. 16th. (Fee \$10).

(4) The examination takes place in April and September. (The fee for examination is \$10, and for the degree \$10. Both fees must be paid to the Registrar not later than April 1st or September 1st).

### SUBJECTS OF EXAMINATION.

#### A.—*History of Mental and Moral Philosophy.*

Plato's Republic (Davies & Vaughan's or Jowett's Translation).

Descartes' Method and Meditations (Veitch).

Mill's Examination of Hamilton and Utilitarianism.

Candidates are recommended to consult Bosanquet's Companion to Plato's Republic, Nettleship's Lectures on Plato's Republic ("Philosophical Lectures," Vol. II) and his article on Plato's Theory of Education in "Hellenica," Caird's article on "Cartesianism" in his "Essays Literary and Philosophic," Watson's Hedonistic Theories, and Windelband's History of Ancient Philosophy.

#### B.—*Principles of Psychology and Ethics.*

Wundt's Outlines of Psychology.

Bosanquet's Psychology of the Moral Self.

Stout's Manual of Psychology.

Mackenzie's Manual of Ethics.

#### C.—*History and Science of Education.*

Bosanquet's Education of the Young in the Republic of Plato.

Burnet's Aristotle on Education.

Davidson's Ancient Educational Ideals.

Bowen's Froebel and Education by Self-activity.

Guyau's Education and Heredity.

Laurie's Comenius.



Herbert Spencer's Education.

Fouillee's Education from a National Standpoint.

The work under any section (A, B, or C) may be taken, and will be examined on, separately.

Candidates taking this course away from the University will require to pay a tutorial fee of \$3 for each section.

Candidates may secure tutorial assistance on any section during the college session, and also during the summer vacation.

#### DEGREE OF DOCTOR OF PEDAGOGY (D. PAED.).

Candidates must comply with the following conditions:

(1) They must possess the degree of M.A. or B.Paed. and must satisfy the Senate of their ability to proceed to the degree of Doctor of Pedagogy.

(2) They must hold (a) a certificate as school inspector or (b) a permanent certificate as specialist granted by the Education Department or (c) a certificate of equal value.

(3) They must submit certificates of successful experience as teachers or school inspectors.

(4) The degree cannot be taken in less than three years after graduation as Bachelor of Pedagogy or Master of Arts.

(5) The candidate must register not later than October 16th, either as an extra-mural or intra-mural student, each session in which work is taken.

(6) A thesis on some educational topic must be submitted through the Registrar not later than the first day of March of the year in which the candidate comes up for examination.

(7) The examination takes place in April. (The fee is \$10 and the fee for the degree \$50. Both fees must be paid to the Registrar not later than April 1st).

#### SUBJECTS OF EXAMINATION.

A.—*History of Mental and Moral Philosophy.*

Höfding's History of Modern Philosophy.

Leibnitz's Monadology (Latta).

The Philosophy of Kant (Watson's Selections).

B.—*Psychology and Ethics.*

Wundt's Physiological Psychology.

James' Principles of Psychology.

Ward's 'Psychology' in Encyclopædia Britannica.

Stout's Analytical Psychology.

Adamson's Lectures on Psychology (Works, Vol. II).

Spencer's Data of Ethics.

Bosanquet's Philosophical Theory of the State.

C.—*History and Science of Education.*

Bacon's Advancement of Learning.

Rousseau's Emile.

Pestalozzi's Leonard & Gertrude (Channing).

De Garmo's Herbart and the Herbartians.

Froebel's Education of Man (Hailman).

Sir J. W. Fitch's Thomas and Matthew Arnold.

Matthew Arnold's Reports on the Elementary Schools in England.

J. R. Russell's The German Higher Schools.

Rosenkranz' Philosophy of Education.

Hinsdale's Horace Mann.

Harris' Psychologic Foundations of Education.

Munsterberg's Psychology and Life.

Dewey's School and Society.

Compayre's History of Pedagogy.

The Chief Recent Educational Reports.

The work under any section (A, B, or C) may be taken, and will be examined on, separately.

Candidates taking this course away from the University will require to pay a tutorial fee of \$5 for each section.

Arrangements have been made to have in the Library duplicate sets of the books required. Extra-mural students can secure these by depositing \$2 for one volume, or \$5 for three volumes, and paying postage both ways. Students desiring to secure books will kindly correspond with Miss Lois Saunders, Librarian.

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DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.)

AND DOCTOR OF SCIENCE (D.Sc.)

I. Candidates for these degrees must comply with one of the following conditions:

(a) If they offer themselves for the degree of Ph.D. or D.Sc. in any two of the Arts subjects, they must previously have taken the degree of M.A. in these subjects, or must satisfy the Senate of their ability to proceed with the course.

(b) If they offer themselves for the degree of Ph.D. in one of the Arts subjects and either Old Testament Language and Litera-

ture or New Testament Language and Literature they must have previously obtained the degree of M.A. or B.A. with first-class honours in the Arts subjects chosen, have completed their course in Theology, and have passed the examination in half of the course for B.D.

(c) If they offer themselves for the degree of Ph.D. in Old Testament Language and Literature and New Testament Language and Literature they must have previously taken an Arts degree and the degree of B.D.

2. Neither of these degree can be obtained in less time than three years after the above conditions have been complied with.

3. Candidates must submit a thesis on some subject connected with their special course embodying the results of original investigation.

4. Candidates for these degrees must make application through the Registrar to the Senate to be allowed to proceed with the course, stating the subjects they wish to offer, and must register either as an intra or extra-mural student each session in which work is taken. For fees of intra-mural students see page 23, for extra-mural, 58. Extra-mural students in addition to the registration fee must pay a tutorial fee of \$5 per session for each subject.

## I. DEGREE OF PH.D.

### LATIN.

The Ph.D. course in Latin is a continuation of the Honours work, but is more specialised and involves a more detailed use of original authorities. Papers will be set in the following subjects:—

(1) Composition.

(2) Translation at Sight.

(3) Roman History from 133 B.C. to 117 A.D.

(4) Latin Literature.

(5) *One* of the following subjects:—

(a) A special period or department of Latin literature studied in connection with original authorities.

(b) A special period or department of Roman history studied in connection with original authorities.

(c) Latin Palæography and Textual Criticism, with a special critical study of Plautus, *Rudens* and *Captivi*, and Lucan V., VII.

All candidates must submit a thesis on some subject previously approved by the Professor, who will be glad to give all necessary information and advice.

### GREEK.

The P.h.D. work in Greek is a continuation of the Honour course. Papers will be set on selected books and candidates will be tested on translation at sight and Greek prose composition. A knowledge of Greek history in the fifth century B.C., based on the original authorities, Herodotus, Thucydides and Xenophon's *Hellenics*, I and II, will be required. One of the following subjects is also included:

- Comparative Philology.
- Archæology.
- Palæology (with Epigraphy).

### GERMAN.

For the degree of Doctor of Philosophy in German there will be required:

1. A general knowledge of the history of the literature.
2. A general knowledge of the history of the language.
3. Accuracy and facility in writing and speaking German.
4. An intimate acquaintance with Gothic, Old High German and Middle High German Texts.
5. An intimate knowledge of the literary works of Lessing, Goethe and Schiller.
6. An intimate knowledge of any representative author of the 19th century since the death of Goethe.
7. A dissertation in German showing originality of treatment.
8. A minute acquaintance with the period within which the dissertation lies.

### ROMANCE LANGUAGES.

The Ph.D. work is meant to be a continuation, along broader lines, of the Honour work. Besides the Thesis, papers will be set testing the candidate's ability to translate unseen passages and to write French Prose, as well as his knowledge of the following set subjects:

1. The History of the French Literature, during any three of the following periods:
    - (a) Till the end of the 15th Century.
    - (b) The Age of Glory.
    - (c) The 18th Century taken especially in connection with the social and political conditions of the country.
    - (d) The 19th Century.
  2. Certain prescribed authors.
  3. The Philology of the Language.
  4. Italian *or* the Comparative Philology of the Romance Languages.
- For further information consult the current Calendar and write to Professor Campbell.

ENGLISH LANGUAGE AND LITERATURE.

Candidates offering this subject will communicate with Prof. Cappon.

HISTORY.

1. The History of England.

Continuous Constitutional History.

Continuous Political History.

A selected Period to be studied in detail from the original authorities.

2. A period of general history to be studied in detail from original authorities.

3. The literature of the special periods selected.

The books on the constitutional history of England to be studied are:—

Stubbs' Constitutional History and Select Charters.

Hallam's Constitutional History.

May's Constitutional History.

Periods for detailed study:

English History.

449-1066

1066-1272

1272-1485

1485-1603

1603-1714

1714-1880

General History.

493-1095

1095-1273

1273-1530

1530-1648

1648-1788

1788-1880

Candidates are required to take the special periods most nearly corresponding with each other in English and general history, and in studying the selected periods they are expected to make themselves acquainted with their social and literary history.

Candidates are requested to put themselves in communication with Professor Ferguson, who will prescribe the authorities to be consulted.

MENTAL AND MORAL PHILOSOPHY.

*I. General Course.*

(A) PHILOSOPHICAL SYSTEMS.

Candidates are allowed the following options:

1. They may offer any *four* of the following books:—

Plato: Theætetus, Republic, Sophist.

Aristotle: Organon (Selections of Oxford Press), Metaphysics (Selections), De Anima, Nichomachean Ethics, Politics, Poetics.

Kant: Kritik der reinen Vernunft, Kritik der praktischen Vernunft, Kritik der Urtheilskraft.



Hegel: Encyclopädie, I and III, Wissenschaft der Logik, I and III, Phänomenologie des Geistes, Philosophie des Rechts, Philosophie der Religion.

Ability to translate the books offered is presumed.

2. They may offer any *two* of the above books, together with either (a) the works of any *one* of the following authors: Rosseau, Comte, Schopenhauer, Lotze, Hartmann, John Stuart Mill, Herbert Spencer, T. H. Green, Henry Sidgwick, or (b) one of the sections under B.

3. They must offer (1) any *two* of the authors mentioned above in Section 2 (a), or (2) one of these authors, together with *one* of the sections under B.

4. Candidates who take the examination for Ph.D. in Latin, Greek, French, German, English, History or Political Science, may offer either (1) any *two* of the books mentioned above in Section 1, or (2) the works of any *one* of the authors mentioned in Section 2 (a), or (3) one of the sections under B.

Acquaintance with the best recent criticism is in all cases required.

#### (B) PRINCIPLES OF PHILOSOPHY.

The following branches of Philosophy may form part of the work offered by candidates See A., Sections 2, 3 and 4):

1. The principles of logic. References: The logical treatises of Hegel, Mill, Jevons, Venn, Lotze, Sigwart, Bradley and Bosanquet.

2. The Principles of Psychology. References: The psychological works of James Mill, J. S. Mill, Bain, Wundt, Sully, Ladd, James, Adamson and Lotze.

3. The Principles of Ethics. References: The ethical works of J. S. Mill, Bain, Sidgwick, Green, Bradley, Spencer, Stephen and Martineau.

4. The Principle of Aesthetics. References: The aesthetic treatises of Aristotle, Kant, Schiller, Lessing, Hegel, Lotze, Schasler, and Ruskin.

#### POLITICAL SCIENCE.

Candidates offering this subject will communicate with Professor Shortt.

*The Degree of Ph.D. in Old and New Testament Language and Literature.*

1. Candidates must take note that the amount and quality of the work demanded for this degree will, in the judgment of the Faculty, require three years' post-graduate work at the University, or five or six years' extra-mural work.

2. Candidates must, at an early date in the course of study for the degree, give notice to the Professors of the department concerned of the subject they have selected for a thesis.

*Old Testament Language and Literature.*

The candidate will be required to show to the Examiners, by means of critical essays and examination papers, that he possesses comprehensive and accurate knowledge in the following departments:

(1) Languages; Hebrew and Aramaic.

(2) History; the history of Israel to the year 141 B.C. Outline of the history of Egypt and Babylon, in so far as these bear on the history of Israel.

(3) Literature; the contents and character of the books of the O. T. and of the following books:—Ecclesiasticus, Maccabees, I and II; Esdras, I and II; Baruch, Tobit, the additions to Daniel.

(4) O. T. Theology or history of the Hebrew religion down to 141 B.C.

(5) Criticism, textual, literary and historical. In this department papers will be set on books, or portions of books, representing all classes of Hebrew Literature, historical poetic, prophetic, etc. The quantity of this work will be arranged with each candidate after consultation with the Professors involved in his course. A list of books and suggestions as to methods of work may be had on application to Prof. W. G. Jordan.

*New Testament Language and Literature.*

The candidate must give evidence by means of critical essays and examination papers, that he possesses comprehensive and accurate knowledge in the following departments:

—(1) The Language of the Greek New Testament.

(2) History; Jewish and General History from the time of Alexander the Great to the end of the first century.

(3) Literature; the Literature of the later Judaism, Palestinian and Alexandrian.

(4) Theology; the Theology of the entire New Testament.

(5) Criticism and Exegesis; textual, literary and historical criticism. In this department certain books of the New Testament will be selected for special study.

Candidates will communicate with the Professors for detailed information regarding the books required for Sections 1, 3, 4 and 5.

## II. DEGREE OF D.Sc.

### *I. Course for the Degree of D.Sc. in Chemistry, Mineralogy, Botany and Geology.*

Candidates are required to have a thorough knowledge, practical and theoretical, of the subjects in one of the following divisions:

#### 1. Chemistry—one of the following groups:

##### A. Inorganic Chemistry.

Chemistry in its relations to Mineralogy.

Inorganic Analysis and Assaying.

##### B. Organic Chemistry.

Chemistry in its relation to Biology.

Organic Analysis.

##### C. General Chemistry, including Chemical Theory in relation to Physics.

#### 2. Mineralogy.

(1) Systematic Mineralogy.

(2) Mineralogy in its relation to Chemistry and Geology.

(3) Petrography.

(4) Ore Deposits.

(5) Determinative Mineralogy.

(6) Assaying.

(7) Economic Mineralogy of Canada.

#### 3. Biology.

Comparative Anatomy and Physiology, Chemistry of Ferments Bacteriology, with either of the following groups:

I. (1) Research in Vegetable Morphology or Physiology.

(2) A practical acquaintance with the Cryptogamic Flora of Canada

II. (1) Animal Physiology and Embryology.

(2) Osteology and Odontography of Vertebrates.

(3) Special Study of Invertebrates (Canadian).

(4) Physiological Chemistry.

A thesis containing original work done in one of these subjects.

#### 4. Geology.

Standing equivalent to Preliminary Honours in Chemistry and Mineralogy will be required of candidates in this department.

Either of the following groups may be chosen by a candidate as his *chief subject*, and he will be required to take the other group as a *subordinate subject*:

(1) Dynamical Geology and Petrography.

(2) Stratigraphical Geology and Palæontology.

The candidate will be expected to show an acquaintance with his subordinate subject equivalent to Honours in the undergraduate course. An intimate knowledge of the chief subject must be shown.

Detailed information to be obtained from the Professors.

## FACULTY OF THEOLOGY.

### *(I) General Announcement.*

The course in Theology extends over three sessions of six months each, and embraces the following subjects of study: Apologetics, two sessions; Systematic Theology, Old and New Testament Criticism and Exegesis, Church History, each three sessions; Homiletics and Pastoral Theology, each one session. Junior Hebrew and Senior Hebrew, each one session. for those who have not included them in their Arts course.

2. The student who desires to enter upon the study of Theology must be a graduate of this University or of a University whose degrees are recognized by the Senate; or he must have completed three years of a university course, as enjoined by the General Assembly.

3. Students are expected to have passed the Junior Hebrew class, and are recommended to take a full course in Arts, and to obtain a degree, before entering upon the study of Theology.

An Arts course, as here recognized, must embrace the study of Greek.

4. Students on entering Theology, or on intimating their purpose to study for the ministry, must be in full communion with the Church; and all such students are required, during their course, to be in communion with a congregation of the Church in Kingston.

5. At the beginning of each session each student must present a certificate to the Secretary of the Faculty from the Presbytery within whose bounds he has resided during the summer vacation; and at the close of each session he shall, at the earliest opportunity, present his certificate to the Presbytery within whose bounds he purposes to reside.

6. Testamurs in Theology are given to students who have passed the sessional examinations on all the subjects prescribed by the General Assembly for students for the ministry.

7. Pass and B.D. examinations are held annually in April and October, and supplementary examinations only in October.

8. For further information see Blue Book of the Church, or apply to Rev. Dr. Ross, Dean of the Faculty.



## (2) *Matriculation.*

Matriculation examinations begin on Monday, Oct. 26th. Candidates must give notice to the Secretary of the Faculty before Oct. 5th.

### *Subjects of Examination:*

Examination papers will be set in the following departments:

1. The Shorter Catechism and the contents of the Gospel of Mark and the Epistle to the Romans, in English.
2. Acts of the Apostles, I-XII in Greek, Dods' Introduction, 76-151.
3. HEBREW—The Article, Pronouns, Inseparable Particles, the Qal of Regular Verb, Grammatical Analysis, Ps. I, I Sam. IX.  
ENGLISH—Amos I, VII, Hos. I-II, Isaiah I, VI, VII, Micah I-III, Jordan's Prophetic Ideas and Ideals, pp. 108.
4. The Acts of the Apostles in the R. V., and Bartlett's Early Church History, pp. 1-66.

One paper will be set in each department.

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## I.—SYSTEMATIC THEOLOGY.

PROFESSOR—Principal Gordon, D.D., LL.D.

The course in this class extends over three sessions.

Lectures will be given on:

The Nature of God. The Nature of Man. The Doctrine of Sin.

Text-book: Van Oosterzee's *Christian Dogmatics*, Part II, Chaps. 1 and 2.

NEW TESTAMENT THEOLOGY... The Teaching of Paul.

Text-book: Stevens' *The Theology of the New Testament*. Part IV.

## PASTORAL THEOLOGY AND HOMILETICS.

In addition to the treatment of this subject by Principal Gordon, a special course of lectures upon the Office and Work of the Christian Ministry will be given by the Rev. G. M. Milligan, D.D., LL.D.

## II.—HEBREW.

PROFESSOR—Rev. W. G. Jordan, B.A., D.D.

FELLOW—H. T. Wallace, B.A., B.D.

### *Junior Hebrew.*

Davidson's Hebrew Grammar, the first twenty exercises, the Verb, pp. 162-182. Psalm 1, Genesis I, I Samuel IX-XI.

### *Senior Hebrew.*

Davidson's Grammar, exercises in paragraphs 20 to 38 inclusive. the Irregular Verbs.

Hebrew Syntax; the class lectures.

Job I-V, Ps. CIII, I Kings XVII-XIX.

### III.—APOLOGETICS.

PROFESSOR—Rev. D. Ross, M.A., D.D.

The course in this class extends over two sessions, and must be taken during either the first and second, or second and third years of the Theological curriculum.

Students who have already taken Honours in Philosophy are exempted from one year's attendance.

1. Lectures on Apologetics from the beginning of the 16th century.
2. Lectures on Fundamental Apologetics, and Comparative Religion.
3. Examination of Bruce's Apologetics, Books I and II.  
Butler's Analogy, Part I.

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### IV.—O. T. CRITICISM EXEGESIS.

PROFESSOR—Rev. W. G. Jordan, B.A., D.D.

Exegesis. Selections from the Poetical Books.

Criticism. The Wisdom Literature.

Honour Course: Hebrew. Selections from the Book of Ecclesiastes.

Exercises in Davidson's Grammar, 38 to the end.

Daniel, especially the portions in Aramaic.

This course extends over two years.

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### V.—N. T. EXEGESIS AND CRITICISM.

PROFESSOR—Rev. D. Ross, M.A., D.D.

The course in this class extends over three sessions. Students who have taken first class Honours in Greek are exempted from one year's attendance on the Pass class, but must during that year take the Honour N.T. class.

Acts of the Apostles.

Commentary: Expositor's Greek Testament.

Kenyon's Textual Criticism, Burton's N. T. Moods and Tenses.

Lectures on Introduction and Criticism.

Honour Course: Epistles to the Romans and Hebrews.

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### VI.—CHURCH HISTORY AND HISTORY OF DOGMA.

PROFESSOR—John Macnaughton, M.A.

Lectures on Christian Thought and Life in the first three Centuries.

Lectures on the history of research into the Life of Jesus.

Fisher's History of the Reformation.

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#### HONOUR COURSE.

Lectures on the Apostolic Fathers, edited by Lightfoot.

Lectures on Gwatkin's Selections from early Christian writers.

Classes open to Theological students who have an elementary knowledge of the German language, are conducted by Professors Macnaughton and Jordan. The text-books for 1907-8 are Spitta's *Die Offenbarung des Johannes* and Marti's *Geschichte der Israelitischen Religion*.

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## VII.—ENGLISH BIBLE.

LECTURERS—*Old Testament*: Professor Jordan.

*New Testament*: Professor Macnaughton.

O. T. Part I. The Pentateuch, early history and histories of the Divided Kingdom down to the time of the writing Prophets.

N. T. Part I. The Gospels.

The Church requires the following discourses to be delivered during the course:—Homily, Lecture and Greek Critical Exercise, Sermon and Hebrew Critical Exercise.

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## *Degree of Bachelor of Divinity.*

### REGULATIONS.

1. Candidates for the Degree of Bachelor of Divinity, (B.D.), must be graduates in Arts in this University, or of a University whose degrees are recognized by the Senate, and must follow the prescribed order of classes in Theology.

2. The degree shall not be conferred until the candidate has completed the theological curriculum with a view to the ministry in the church to which he belongs, and has passed a satisfactory examination in the branches of Theology taught in the University.

3. The divisions of the examinations shall be (1) The Holy Scriptures. Candidates will be expected to show a competent knowledge of the contents of the Old and the New Testaments, and to show special acquaintance with at least one book from the O. T. and one from the N. T. The Revised Version should be used. (2) O. T. Criticism and Introduction, Hebrew and Aramaic, or N. T. Criticism, Exegesis and Introduction. (3) Any one of the following:

Systematic Theology.

Church History and History of Dogma.

Apologetics and Comparative Religion.

Two papers will be set in (1) and four papers in each of the other divisions.

4. Candidates who have completed the Theological course may be examined in all the subjects, or may defer their examinations in any subject.

5. Students may be admitted to examination in only one division at the end of the second session of their theological course.

6. Students must make 60 per cent. in the Pass examinations of subjects not included in their B.D. course, and 67 per cent. in each of the ten papers of the B.D. course.

7. A candidate may, subject to the preceding regulations, appear at any University examinations in Theology, provided he gives three week's notice of his intention to the Registrar and pays the examination fee.

Autumn examinations begin on Monday, Oct. 26th. Candidates must give notice to the Dean of the Faculty before Oct. 5th.

Subjects of Examination:

- I. The Holy Scriptures. The contents of the Old and New Testaments generally with a special knowledge of Isaiah and St. Luke, in the Revised Version.

Books recommended:

Bennett's Primer of the Bible, or Kautzsch's Outlines of O. T. Literature.

Driver's Isaiah.

Menzies' The Earliest Gospel.

- II. Hebrew and Aramaic. O. T. Introduction and Criticism.

(a) General Introduction to the O. T. Literature.

(b) Criticism and Exegesis. Ecclesiastes.

(c) Aramaic, The Book of Daniel.

There are two papers in division (b) and one each in (a) and (c). Extra-mural candidates may substitute for (c) Gen. I-IV.

Books to be consulted:

Driver's Introduction, Bacon's Genesis of Genesis, Driver's Genesis, Davidson's Job, Cornill's History of Israel, Dillmann's Genesis, The Oxford Hexateuch, Bradley's Lectures on Job, Driver's Daniel, MacFayden's Messages of the Prophetic and Priestly Historians, H. P. Smith's O. T. History, Cheyne's Origin of the Psalter, Gunkel's Legends of Genesis.

Ryle's Ezra, Cambridge Bible, Skinner's Isaiah II, Driver's Isaiah, Cornill's Prophets of Israel.

Ryle's Early Narratives of Genesis.

Duff's Abraham.

MacFayden's Introduction.

Jordan, Prophetic Ideas and Ideals.

### III. N. T. Criticism, Exegesis and Introduction.

- (a) 1. Canonics.  
Westcott's History of the Canon of the N. T.
- 2. Textual Criticism, MSS., Versions and principal disputed passages.  
Kenyon's Textual Criticism.  
Westcott and Hort, Greek N. T. Introduction.
- (b) Introduction, Salmon, Weiss, Expositor's Greek Test, Articles in Hastings' Bib. Dictionary and Encyclopedia Biblica.
- (c) Exegesis, Epp. Epistles to the Romans and Hebrews.  
Commentaries: I Cor., Edwards, Findlay in Expositor's Gr. Test.; Gal. Lightfoot, Ellicott, Expositor's Gr. Test; I Peter, Bigg's, International Crit. Com.
- (d) N. T. Greek; Burton's Syntax of the Moods and Tenses, pp. 73-129.  
Blass' Grammar of N. T. Greek., Moulton's Grammar of N. T. Greek.

### IV. Systematic Theology.

- (a) The Christian Conception of God; Caird's Fundamental Ideas of Christianity, Van Oosterzee's Christian Dogmatics, pp. 234-354.
- (b) The Christian Doctrine of Sin; Tulloch, Muller Vol. I.
- (c) The Atonement; McLeod, Campbell, Dale, Lidgett.
- (d) The Church; Hatch's Early Organization, Hort's Ecclesia.

### V Church History and History of Dogma.

- (a) Church History. Ante Nicene Period; Gwatkin's selections from early Christian writers, and Lightfoot's Apostolic Fathers.
- (b) History of Dogma.  
The Development of Christian Thought in the first three Centuries.

#### Books to be consulted:

Neander's Church History, Vols. I, II; Ramsay's Church in the Roman Empire before A.D. 170, part II; Dorner's Doctrine of the Person of Christ, Vol. I; Forrest's Christ of History and Experience; Hooker's Laws of Ecclesiastical Polity, Book V, sections 50-57; Allen's Christian Institutions and Unity of Christian Thought.

### VI. Apologetics and Comparative Religion.

- (a) Philosophical and Historical.  
Fraser: Philosophy of Theism. (Gifford Lectures).  
Caird: The Evolution of Religion.  
Bruce: Apologetics.
- (b) Comparative Religion.  
Grant: The Religions of the World.  
Menzies: History of Religion.



benefactors have placed at the disposal of the Principal a few nominations, exempting from payment of class fees throughout the course in Arts, for intending students of Theology who have matriculated. Applications for these should be made to him or to the Registrar before Oct. 1st.

The Stewart bequest of \$5,000 to the Theological Department will be administered by the Faculty in terms of the will.

## FACULTY OF LAW. DEGREE OF LL.B.

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1. This degree will not be conferred upon any undergraduate or upon any graduate in Arts of less than one year's standing.

2. Graduates who have taken the honour courses of this University in History and Political Science may proceed to the degree by passing on the following works:—

Commentaries of Gaius, Abdy and Walker.

Institutes of Justinian. Sandars.

Harris' Principles of Criminal Law. Also Canadian Criminal Code, with amendments.

Maxwell's Interpretation of Statutes. Also Interpretation Acts, in Revised Statutes of Canada and Ontario.

Westlake's Private International Law.

T. A. Walker's International Law.

O. W. Holmes' The Common Law.

Goodnow's Comparative Administrative Law.

Dicey's Law of the Constitution.

Houston's Constitutional Documents of Canada.

3. Barristers-at-Law or persons who have been admitted as students-at-law by the Law Society of Upper Canada and have passed their second Intermediate Examination will be admitted to the degree by passing on the honour course of this University in History and Political Science together with the works specified in section 2.

4. Graduates in Arts of this or any recognized University, being Barristers-at-Law, will be admitted to the degree by passing on the following works in addition to those specified in section 2:—

Bryce's American Commonwealth, Vol. I.

Stubbs' Constitutional History of England.

Bagehot's English Constitution.

Dicey's Law and Public Opinion in England.

Holland's Elements of Jurisprudence.

Maine's Ancient Law.

5. Candidates are required to send notice to the Registrar, before the first day of March, of their intention to present themselves at any of the examinations.

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